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**PUBLIC LAND LEASING IN HONG KONG: FLEXIBILITY AND RIGIDITY IN ALLOCATING THE SURPLUS LAND VALUE**

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Submitted to the Department of Urban Studies and Planning  
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## **ABSTRACT**

In this study, I examined the viability of four mechanisms of land-value capture under the public land-leasing systems, using Hong Kong as a case. Because the State is the landowner under a leasehold system, it can capture the land value through four ways: (1) at the initial establishment of land contracts, (2) by the collection of an annual land rent, (3) during lease renewals, and (4) through modifications of lease conditions. Although I found that the Hong Kong government raised a large amount of revenues for infrastructure investment by leasing public land, not all four mechanisms work equally well. From my case studies, I found that the government captured 39 percent of the increased land value occurring between 1970 and 1991 from land sites leased in the 1970s. This captured value, which the government collected mainly from the initial auctions, financed an average of 55 percent of the average annual infrastructure expenditures in Hong Kong between 1970 and 1991. In trying to capture the land value during lease renewals and modifications, the government encountered political resistance from lessees and difficulties in negotiating and enforcing lease agreements.

The findings from my study may have important implications on land policy making in countries where officials are experimenting with leasehold systems. Debates on the property-rights arrangements of land in some former socialist countries and the People's Republic of China focus on whether the State should adopt a freehold or a public leasehold system. One key issue is related to the capturing of the future increases in land value by the State to finance public infrastructure investment. If capturing land value after the initial establishment of leases is politically untenable, officials should plan their land supply carefully. A rapid disposition of land when its value is low may impede the possibility for the government to recoup the increased land value in the future.

Moreover, I develop a framework that may guide policy makers to investigate whether or not they should adopt the Hong Kong leasehold system. The framework is composed of two parts. The first part is for identifying the potential problems of land leasing and is based on the concept of transaction costs instigated by Coase, Williamson, North, and other scholars. The second part is an extension of Hirschman's exit-voice concept to analyze how the government and lessees can use

different strategies--exit, voice, persuasion, and coercion--to revise the existing rules to minimize transaction costs.

In applying this framework to the Hong Kong case, I found that neither law nor the polity played a dominant role in minimizing transaction costs of land leasing in Hong Kong. Instead, the diverse outcomes of land-value capture depended upon the interplay of the parties' strategies chosen according to varying contexts. More importantly, I found that it was through persuasive actions, rather than coercion, in the form of a wise land policy that the government gained its legitimacy of being the landowner.

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## CHAPTER 1

### INTRODUCTION

As the political and economic reforms of some former socialist countries and the People's Republic of China (PRC) progress rapidly, policy makers and scholars are facing an unprecedented challenge. This challenge is to transform their centrally planned economies into more "market-oriented" economic systems. Among many issues related to this transformation, the reassignment of property rights to land is most sensitive. The sensitivity is mainly due to the controversy involved in the distribution of the future increases in land value. On the one hand, governments want to capture the "surplus land value" as revenue to finance public infrastructure and other social services. (I will define surplus land value later.) On the other hand, governments do not want the recouping of the increased land value to impede private incentives to invest in land and real estate. Balancing these two objectives is not always easy.

In this study, I explore how governments may deal with this dilemma by leasing public land, using Hong Kong as a case study. Hong Kong is one of the few cities in the world in which the State owns all land and land tenure is organized under a leasehold system. Some scholars, such as Castells and Kwok (1990, pp. 40-47) and Haggard (1990, p. 122), suggest that there may be an indirect relationship between the Hong Kong miraculous economic growth and its land policy. Hence, the Hong Kong experience of managing public land through land leasing has attracted attention from policy makers in Central and Eastern Europe, the former Soviet Union, Vietnam, and the PRC. In all these countries, almost all the ownership of land is currently in the hands of the State, and the option of leasing public land, rather than selling it, becomes viable. Owing to the lack of thorough studies on whether land leasing will allow the State to capture the future increases in land value, I examine the general experience of land-value capture in Hong Kong. In my investigation, I focus on three questions:

1. Does public land leasing allow the government of Hong Kong to capture a major portion of the surplus land value to cover the costs of infrastructure investment between 1970 and 1991?

2. What are the "transaction costs" associated with the land-value capture under the Hong Kong leasehold system?<sup>1</sup>
3. How do the government and other relevant parties minimize these transaction costs by revising the existing "institutional arrangements" that govern the allocation of the increased land value?<sup>2</sup>

Because the above-mentioned countries are experimenting with leasehold systems, answers to these questions may have important implications on land policy making, not only in Hong Kong but also elsewhere.

This study is the first detailed examination of the land-value-capture experience under the Hong Kong leasehold system. Moreover, as far as I know, no analysts have even applied the "Coasian" concept of transaction costs to study land-value capture through land contracting. In applying the transaction-costs concept, I also develop it further by incorporating Hirschman's exit-voice idea and the potential costs of government's involvement into the analytical framework in order to study public land leasing in Hong Kong. In Chapters 2 and 3, I will explain thoroughly why the Coasian concepts are relevant to public land leasing and how I extend them.

In this introductory chapter, I first review issues of capturing the surplus land value and describe the general experiences of solving these problems in other countries. This discussion will provide the context upon which the whole study is based. Second, I briefly discuss how public land leasing can assist the government to recoup the increased land value and state my argument. Third, I introduce the theoretical framework that I will use to identify problems of land contracting and to explain how the contracting parties rectify these problems. Fourth, I define the scope

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<sup>1</sup> Simply put, these transaction costs include the costs of delineating, negotiating, and enforcing the parties' rights to benefit from land and of maintaining the government's integrity of managing public land. I will discuss these costs in detail later.

<sup>2</sup> I define institutional arrangements as a set of rules that guide people's behavior by providing incentives for socially desirable actions and constraints to prohibit rule violation. These rules could be enforced by the State and courts or by other informal mechanisms, such as social norms (North, 1990, pp. 3-8; Sjöstrand, 1993, pp. 9-13).

of this study and the methodology of my research. Finally, I illustrate how I organize this study to examine in detail each of the issues introduced in this chapter.

### **Issues of Land-Value Capture**

In the realm of land policy making, the distribution of the surplus land value is one of the most controversial issues. The surplus land value is the portion of the increased land value that is generated by changes in government land-use regulations, public investments in infrastructure, urbanization, location advantages, and/or population growth. This land value does not include the part of the increase that is attributable to capital invested in land by private individuals, including the allowances for holding costs and risks.<sup>3</sup> Should private landowners be allowed to keep the "unearned" land rent, or should the government and the community recapture some or all of this increased land value? If the "public" should reap this benefit, analysts must know what instruments a State should use, and how it balances the costs and benefits of the capture in both economic and political terms. Scholars and analysts in both developed and developing countries have debated these issues for many years and have struggled with the implementation of various policies. Some countries have experienced "success" in employing certain instruments, whereas others have exacerbated the already politically sensitive property relations between the State and private property owners. Before describing these experiences, I first explain why the distribution of land-value increments is so problematic.

The fundamental cause of the problems is related to the multiple determinants of land value. Dunkerly (1983, p. 23) and Hagman and Mischynski (1978, p. 15) argue that multiple determinants of land value complicate the assignment of the property rights to different claimants, so that they can derive benefits from land. There are, at least, five factors that determine the changes in land value: (1) changes in permitted land uses, (2) changes in locational advantages as towns and cities

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<sup>3</sup> Surplus land value is also referred to as a windfall, a land-value increment, and an unearned land rent in the literature. I use these terms interchangeably here.

expand, (3) execution of public works and improvements in social services, (4) the growth of urban population through migration and urbanization, and (5) increases (or decreases) in private investments in land. Three groups may benefit from increases in land value, namely landowners, the government, and the community. Ideally, landowners should be entitled to the portion of the increased land value that is due to their investments in land and the willingness to bear the risks involved. The government should obtain the portion that is generated by improvements of public infrastructure and services. The rest of the "socially" created land value that is due to urbanization and population growth should go to the community. The government, normally, will also try to recoup this portion of the land value on behalf of the community. In reality, to separate the exact amount of surplus land value from the overall increases in land value is very difficult and controversial.

Although governments in most countries use a property tax to take back a portion of this land value, most analysts consider that a property tax is not an effective instrument to achieve this objective. Doebele, Grimes, and Linn (1979, p. 90) argue that calculations of an "appropriate" tax rate to capture the surplus land value are very complex and require an expertise that may not be available in most developing countries. Similarly, the experiences of capturing the land-value increments using various tax instruments in developed countries were mostly "unsatisfactory" (Alterman, 1982, pp. 44-47). There are, at least, three reasons.

First, based on the experiences of value capture in Britain, Israel, and the United States, Alterman (1982, p. vi) argues that the implementation of various types of value-capture policy has been "weak." The difficulties are related mainly to designing policies that can achieve the objective of capturing the surplus land value and, at the same time, fulfilling the goals of income redistribution and urban growth management. For instance, some landuse controls, such as a restriction on the height of buildings in, say, a commercial district, may achieve the goals of maintaining public safety and limiting urban growth. Yet, this restriction will also limit the potential increases in land and property values and, in turn, reduce the amount of tax

revenues that the government can collect from the property owners. The issue of how a government can juggle different policy objectives is difficult.

Second, increasing property taxes is politically unpopular, especially in urban areas (Fowler, 1974, p. 83; Doebele, 1991, p. 103). In the United States, people voted to establish legal constraints on the amount of property taxes that local governments could impose on their citizens. For instance, in California, an amendment was made to the state constitution in 1978, known as Proposition 13, to limit the ad valorem tax on property to one percent of the full "cash" value of the property and prohibit any additional property tax (Kemp, 1980, p. 11-14). Similar legislation--Proposition 2 1/2--was passed in Massachusetts in 1980 to reduce property taxes. The law prohibited property taxes from exceeding 2.5 percent of the cash value of the local tax base (Susskind and Serio, 1983, p. 3-4). These amendments to the constitution of the two states have weakened the ability of their local governments to raise public funds through the collection of property taxes.

Third, the collection of property taxes is administratively complex and expensive (Doebele, 1991). Governments have to establish and maintain cadastral records. They also have to reevaluate properties (continuously if values are changing rapidly) and enforce tax collection. Owing to these difficulties, in most cases, the increased land value benefits private landowners more than it contributes to government revenues for recovering the costs of public infrastructure investment.

In some instances, the inability of governments to capture the surplus land value creates two problems, especially in developing countries. The first problem is that it worsens the already uneven distribution of income. Landowners, in some countries, are able to accumulate considerable wealth through increases in land prices that are due either to rapid urbanization or increases in public works. If ownership of land is unevenly distributed, the newly created wealth will be concentrated in the hands of a small percentage of the population. Although landowners are able to benefit financially from the rapid land development, the "landless" are not even able to obtain affordable housing. The deterioration of income distribution may generate

conflicts among income groups and undermine the political stability of these countries, which, in turn, will hinder their social and economic development.

The second problem is that the inability to capture the surplus land value may also weaken the fiscal capability of governments to provide public goods, such as infrastructure and other social services. This problem is compounded by the nature of public goods in that their consumption is mostly "joint" and "non-exclusive." Government officials, normally, have difficulty in imposing charges on using, say, a public road. In some instances, the revenue that they collect may not always justify the costs incurred of establishing and enforcing a system to levy these charges. Unable to balance the revenues and costs in public projects, some governments encounter a fiscal crisis. With a weak financial ability to supply public services and infrastructure to match the demand generated by rapid urbanization, governments in some developed and developing countries face problems, such as a housing crisis and degradation of public services (Dunkerley, 1983, p. 6). Urban residents in low-income neighborhoods, normally, bear the highest costs of unclear water, poor living environment, and air and land pollution. These conditions, in turn, aggravate the already difficult livelihood of the poor.

Owing to these unsuccessful experiences of trying to capture the increased land value through taxation, analysts are searching for alternatives. Hagman and Misczynski (1978) and Alterman (1982) have provided some comprehensive reviews of land-value-capture techniques. The most commonly used methods besides property taxes in the United States and developing countries are special assessments (Misczynski, 1978, pp. 311-335), exactions (Altshuler and Gómez-Ibáñez, 1993; Jacobson and McHenry, 1978, pp. 342-366), valorization charges (Shoup, 1978, p. 1-84; Doebele et al, 1979, pp. 73-92), and land readjustment (Doebele, 1982; Acharya, 1988, pp. 103-117), which I review briefly in Appendix A. Although governments have used these techniques to recover part of the costs of infrastructure investment, there are, at least, two common drawbacks of these techniques that public land leasing could avoid, if it is applied to all land in a city or a state.

First, all these alternatives are project-specific, meaning that the provision of infrastructure is restricted to a particular locale. These methods could not solve the financial difficulty of funding large-scale public projects and services, such as highways, seaports, education, and low-income housing.

Second, these techniques are not designed to target poor neighborhoods. Indeed, incentives to initiate schemes, such as valorization charges and land readjustment, are dependent upon the conditions of the real estate market. It would only be profitable for the government and property owners to cooperate in infrastructure development when the land prices are increasing. Poor areas with low land values or potential for growth will not attract any investment and, thus, the accompanying infrastructure. The issues of how governments can raise funds from land to build public infrastructure and services for the poor remain unresolved. Among many suggestions, some analysts propose the adaptation of the public leasehold systems. In the remainder of this study, I will examine whether land leasing is a viable alternative to all these methods.

### **Public Leasehold Systems**

Under public leasehold systems, in general, the involved parties perceive property rights to land as a "bundle" of rights. This bundle is composed of the rights to use, develop, transfer, and inherit land, and the right to derive benefits from these land transactions. The government can assign each element of the bundle to different parties through land leasing. The State may retain the right *to own* land and lease the right *to develop* land to private developers. In theory, there should be no problem for the government to capture the land-value increments as long as it retains the right to own and benefit from a certain portion of the future increases in land value. Most scholars, such as Bristow (1984), Farvacque and McAuslan (1992, p. 43), Archer (1973, p. 8; 1994, p. 24), and Yeh (1994, p. 8), propose that the State can capture the land value by collecting payments from lessees: (1) at the initial auctions, (2) through lease modifications, (3) during lease renewals, and (4) an annual rent. I call these the four land-value-capture mechanisms (or just four mechanisms) in this study. (I will

discuss these four mechanisms in detail in Chapter 4.) The major objective of this study is to evaluate how these land-value-capture mechanisms work in practice under the Hong Kong leasehold system. In the coming chapters, I will show that the Hong Kong government was able to capture a large portion of the increased land value by leasing public land. Yet, it relied mainly on the initial auctions, not the other three mechanisms, to recoup the land-value increments.

### **Theoretical Framework**

In explaining why the four mechanisms work differently, I apply the idea of transaction costs, originated by Coase (1960, pp. 1-44), to identify the problems of recouping the surplus land value through land leasing. The connection between Coase's idea of transaction costs and land-value capture is that both are related to the issue of externality. In short, the surplus land value is a "positive" externality for the property owners that is generated by factors related neither to their decisions nor investments in land. In his most renowned article The Problem of Social Cost, Coase (1960, pp. 1-44) discusses how transaction costs could affect the "internalization" of negative externalities. In a world of zero transaction costs, the parties involved in a dispute arising from the presence of an externality could settle their conflict through contracting their property rights.

For the public leasehold systems, some scholars have applied this Coasian reasoning implicitly to argue that a government can delineate and assign the surplus land value by negotiating with leaseholders costlessly. Assume that transaction costs are minimal, the parties of a contract would determine in advance and in detail the best possible actions to allocate the land value and account for every contingency that might arise in the future.

Many scholars, such as Coase (1960), Williamson (1985, p. 15-29), and North (1990, pp. 27-35), emphasize that transaction costs are never zero in reality. Capturing land value through land contracting in Hong Kong is no exception. By expanding Coase's idea, I have identified at least four types of transaction costs: (1) maintaining the legitimacy of government as a representative of society in negotiating

land contracts; (2) delineating the parties' rights to benefit from land; (3) deriving mutual agreements in negotiations; and (4) enforcing and administering the established agreements. (I will define these transactions costs in Chapter 2.)

When transaction costs are not zero, institutions matter. Scholars, such as Williamson (1985), North (1990), and Eggertsson (1990), have expanded on Coase's transaction-costs concept and have begun to investigate how institutions can minimize transaction costs. Because transaction costs of land leasing in Hong Kong are not minimal, I investigate how the relevant parties devised institutions to lower these costs. The literature on the State and law within this school of thought is particularly relevant to the Hong Kong case. In terms of explaining the role of the State, scholars seem to conclude consistently that the involvement of the State will increase transaction costs rather than reduce them (Cheung, 1982, pp. 42-64; Burton, 1978, pp. 71-91; North, 1979, pp. 249-259; 1981, p. 23). For law, scholars, such as Williamson (1985, pp. 164-166 & 250-252) and Ellickson (1986, pp. 623-686; 1991, pp. 280-283), argue that legal rules are deficient in minimizing the transaction costs of contracting.

In this study, I will show that the argument about the State in the transaction-costs literature is not helpful in explaining the role of the Hong Kong government in land contracting. Despite the fact that the State owns all land and controls its allocation, there is no evidence of an attempt by government officials to maximize their own benefits at the expense of impeding the private incentives to invest in land and real estate. I will also study how the parties in Hong Kong use law and litigations to lower transaction costs. I will argue that the effectiveness of law in reducing transaction costs is dependent upon contexts and the interplay of strategies used by the parties. Put differently, an understanding of the process of transaction-costs minimization matters.

In order to examine thoroughly the process of how the Hong Kong government and lessees have revised rules to reduce transaction costs, I develop a framework based on the work of Hirschman (1970). I use the framework to identify the parties' choices of strategy to revise the existing rules. These strategies include "exit," "voice," "persuasion," and "coercion." (I define and discuss all these terms thoroughly

in Chapter 3.) By examining the different strategies employed by the parties to influence each other's behaviors and decisions, I attempt to trace how new rules are derived, and how these activities of rule reformulation are connected to the domain of the State, law, and civil society.

### **Research Methodology**

To support my arguments, I used both quantitative and qualitative methods of analysis. I collected data from two sources to perform a quantitative analysis on whether the Hong Kong government captured a major portion of the increased land value for infrastructure investment. First, I gathered primary data from my "contract-based" case studies. The contract-based case studies were detailed examinations of some randomly selected land leases for specific land parcels in Hong Kong. From these cases, I assembled data on the total amount of money and land rent that the government collected from these land contracts. I then used these data to calculate the percentages of land value captured by the government. These calculations are instrumental in showing how successful the Hong Kong government was in recouping the land-value increments through land contracting. I will explain the method of selecting my samples for the contract-based case studies and calculating the percentages in detail in Chapter 5.

Second, to determine how significant the captured land value was in financing public infrastructure in Hong Kong in comparison to selected U.S. cities, I compiled secondary data published by the Hong Kong and the U.S. government. I used these data to illustrate some general relationships between government infrastructure expenditures and land revenues in Hong Kong and the selected U.S. cities.

To identify the transaction costs of capturing land value through land leasing, I use two "incident-based" case studies. The main purpose of conducting these case studies is to examine qualitatively the major incidents in the history of Hong Kong that had profound impacts on the government's policy in allocating the increased land value during lease renewals and modifications. I reviewed all the major revisions of the land policy from 1970 to 1991 and found two cases. Both of them were about .

prolonged controversies that happened in the 1970s related to lease-renewal policies. Through the examination of these historical incidents, I show how "politics" hindered the ability of the government to demand payments from lessees when they renewed their leases.

To supplement the information gathered from the incident-based case studies and to cross-check its consistency, I conducted personal interviews with government officials, land developers, and experts in Hong Kong. These interviews were conducted in the summers of 1992 and 1993 and the fall of 1994. Within the public sector, I interviewed three administrative officials who are responsible for formulating the general land policy of Hong Kong. I also interviewed fifteen officials in the professional branches who carry out the day-to-day practice of land leasing. To learn the perspectives of the lessees, I talked to five key land and real estate developers in Hong Kong. Last, but not least, other important sources of information were from my many discussions with Hong Kong scholars who teach at major universities there and review of the existing literature concerning the Hong Kong land-leasing system.

### **Scope of the Study**

The topic of land management under the public leasehold system is vast. It includes how public land leasing affects: (1) the allocation of land resources, (2) the land-value capture, (3) urban-growth management, (4) urban economic development, (5) urban renewal, and (6) urban design. The aim of my investigation of the Hong Kong leasehold system is only to provide a detailed study of the second issue--the Hong Kong experience of land-value capture. Indeed, all the above-mentioned issues are interrelated. I will try to identify their connections with the issue of land-value capture, but will not discuss them in detail. In the concluding chapter, I will propose future research on the other important subjects.

Moreover, the conclusions of this study may not apply to all areas of Hong Kong. The city of Hong Kong is composed of four major districts--Hong Kong Island, Kowloon peninsula, New Kowloon, and the New Territories. (See Appendix B.) My discussion of the Hong Kong leasehold system focuses on the first three

districts, which are the most urbanized areas. The reason for omitting the New Territories is that land-tenure arrangements in this district are very distinct from the rest of the colony. When the British leased the New Territories, it was inhabited by villagers. According to agreements between the British and the Ching government as stated in the Nanking Treaty, the British had to observe all land rights of the inhabitants. In essence, they must resolve any land disputes based upon the traditional Chinese land law and customary rules (Cruden, 1986; Selby, 1991, pp. 45-77; Faure, 1986). The government has preserved these special conditions in the land policy that governs the allocation of land rights to "indigenous villagers" in the New Territories (Hong Kong government, 1992). Because of this unique policy, conclusions derived from the study of the other three districts may not be applicable to the New Territories. To simplify my discussion, I thus exclude the New Territories in my study.

Finally, my study period is from 1970 to 1991. The Hong Kong experience of land-value capture outside this period could be different. More importantly, I do not analyze in detail the impacts on land leasing of the return of Hong Kong to the PRC. Political events that occurred after 1982 were unique, and lessons learned from this special situation would not be applicable to other countries. In 1984, the British and the PRC governments signed a Sino-British Joint Declaration. According to the declaration, the Hong Kong government agreed to limit the amount of land disposition to 50 hectares annually. Besides, the existing government retains half of the land revenues collected from land transactions. For the other half, the PRC government must save it for public infrastructure expenditures after 1997. All these agreements and the political atmosphere in the 1980s, undoubtedly, affected land contracting in Hong Kong. Throughout this study, I will just identify how these political changes may affect my analysis, whenever it is appropriate.

### **Organization of the Study**

This study is composed of eight chapters. Following this introductory chapter, I discuss the connection between the problems of the land-value capture in Hong Kong

and the idea of transaction costs in Chapter 2. I then present my analytical framework of analyzing the Hong Kong case in Chapter 3. I will state how I combine the exit-voice concept with transaction costs and how I modify Hirschman's original idea in order to apply it to the Hong Kong case. These two chapters contain the key theoretical discussions of this study.

In Chapter 4, I explain how the Hong Kong government has employed land leasing to achieve three major policy objectives: (1) managing urban growth, (2) stimulating industrial and public infrastructure development, and (3) capturing the future increases in land value. The purpose of the discussion is to provide the background information for my analysis of land-value capture in the other chapters.

Chapters 5, 6, and 7 form the core of the empirical discussions of the Hong Kong case. I discuss whether the government could capture a major portion of the surplus land value in Chapter 5. I assert that the Hong Kong government seemed capable of obtaining a significant portion of the increased land value and using it to finance a large part of its infrastructure expenditures between 1970 and 1991.

To gain a deeper understanding of how the government captured this land value, I examine the four mechanisms of land-value capture in Chapters 6 and 7. I analyze revenues generated from the initial auctions and modifications of lease conditions and then explain outcomes of the land-value capture by identifying the transaction costs associated with these two mechanisms. In Chapter 7, I perform the same analysis for land-value capture during lease renewals. Chapter 8 is a summary of the major findings and a discussion of the policy implications of my arguments. I also propose some potential future research.

Technical Note:

All Hong Kong dollars used in this study are adjusted to the 1991 value, when HK\$7.77 was equivalent to US\$1.00.

## CHAPTER 2

### STUDYING LAND CONTRACTING FROM A TRANSACTION-COSTS PERSPECTIVE

Many analysts have argued that land leasing will allow the State to capture the surplus land value. For instance, Farvacque and McAuslan (1992, p. 43) and Archer (1973, p. 8; 1994, p. 24) argue that because the State is the ultimate landowner, it can share the benefits of land-value appreciation with land developers by, say, renegotiating the level of rent with them regularly. Alternatively, when the land leases expire, the State can obtain additional payments from developers in order to extend their rights to use the leased land (Yeh, 1994, p. 8). There is, however, inadequate empirical research on identifying the necessary institutional arrangements to allow the state to do that. As far as I know, no analyst has examined the possible institutional problems of: (1) delineating who has the right to benefit from the land-value increments, (2) establishing contractual agreements on how to distribute them, and (3) administering and enforcing the established agreements. In this chapter, I examine these issues at a theoretical level.

I try to achieve two objectives. The first is to explain how I have applied the idea of transaction costs, originated by Coase (1960, pp. 1-44) and extended by Williamson (1975, 1985), North (1981, 1990), Eggertsson (1990) and many others, to identify problems of land contracting in Hong Kong. I then propose four possible "costs" of capturing the surplus land value through land leasing. One major argument of these scholars is that when transaction costs are high, the involved parties will devise an institution--a set of rules--to minimize these costs. Among the vast literature related to the idea of transaction costs and institutions, I focus on the "property-rights school" of the "New Institutional Economics."<sup>1</sup>

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<sup>1</sup> Scholars who participate in the study of transaction costs and the role of institutions in reducing them have instituted the accumulated knowledge as the "New Institutional Economics" (Furubotn and Richter, 1993, pp. 1-10). There are three sub-disciplines within this school of thought: (1) the property-rights school, the law-and-economics school, and (3) industrial-organization school. See Posner (1993, pp. 73-87), Joskow (1991, pp. 51-83), Eggertsson (1990), and Williamson (1975, 1985, 1993,

The second objective is to discuss three aspects of the property-rights-school literature that are related to the Hong Kong case: (1) the evolution of property-rights arrangements, (2) the State, and (3) law as institutions in minimizing transaction costs. The purpose of the discussions is to see whether the existing theories can help me to explain the Hong Kong case. Literature on the subjects of the State and laws from other disciplines, such as political sciences and legal studies, are vast. In this study, I only discuss theories that have been applied to examine transaction costs and are relevant to land contracting.

### **Land-Value Capture and the Coase Theorem**

Under the leasehold systems, in general, the involved parties may distribute the surplus land value through contractual agreements. These agreements are stated in terms of annual rents and/or lump-sum payments paid at the time when the contracting parties first establish, renew, or modify the land leases. Because this method of allocating the land value is based on contracting, I review the literature related to this subject. Coase (1937, pp. 386-405 ;1960 pp. 1-44), Williamson (1985), Hart and Holmstrom (1987), and many other scholars have dealt extensively with similar issues in business contracts and economic exchanges; but, as far as I know, no one has ever applied their ideas to study public land leasing. In order to show the applicability of these scholars' works in studying land leasing, I illustrate how I link the issues of capturing land value to the "Coase Theorem."

The purpose of incorporating the Coase Theorem into this study is not to test its validity using Hong Kong as a case. Empirical tests of the Coase Theorem are rare, because to prove the validity of this theorem will require an abstract level of analysis and the creation of a "never-never-world" of zero transaction costs. As I will show later, public land leasing in Hong Kong is not operated under the condition of minimal transaction costs.

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pp. 99-118) for a discussion of the literature.

Moreover, I do not try to evaluate the efficiency of land allocation and land-value capture under the Hong Kong leasehold system based on the argument of the Coase Theorem. It would be difficult to define empirically the "efficient" allocation of resources in the Coasian terms. Efficient allocation, as defined in the Coase Theorem, implies the condition of Pareto-optimality. That is to say, the allocation of resources is in a condition in which the reassignment of resources to enhance the utility of an individual can only be made by making someone else worse off. To operationalize and test this condition empirically, I must have precise information regarding the utility functions of all parties involved (Donohue, 1989, p. 551). I relate the Coasian arguments to the Hong Kong case because the concept of transaction costs is instrumental in identifying the potential problems of distributing the increased land value through land leasing.

The first thing that leads me to examine the Coase Theorem in relation to land contracting is that capturing the surplus land value is an issue connected to "externalities." As I mentioned briefly in Chapter 1, the surplus land value is a positive externality generated neither by the capital investment nor the decision of the property owners.<sup>2</sup> I have discussed the five determinants of increases in land value in Chapter 1 and will not repeat them here. Because only one of the five factors that affect land value--private investments--is under the control of land owners, a portion of the increased land value is, thus, a positive externality to them. In dealing with issues of both negative and positive externalities, the Pigovian argument and the Coase Theorem are the two most influential ideas.

The Pigovian approach to internalizing an externality is through taxation. For instance, a factory pollutes the river during its production process. Assume that the

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<sup>2</sup> Depending on which perspective a person takes to view the impacts of the increased land value, it can be defined either as a negative or a positive externality. For example, a renter may perceive increases in land value as a negative externality, because the potential rises in rent are not related to his or her actions, but the general increase in demand for housing in the neighborhood. Here, I view the land-value increment as a financial gain or source of government revenue. Hence, I refer to it as a positive externality.

clean water in the river is an "open access" resource; thus, the costs of polluting the river are not incorporated into the production costs of the factory.<sup>3</sup> The pollution, eventually, leads to high clean-up costs that may have to be imposed on the community at large. Hence, the private costs of producing the commodity for the factory diverge from the "social costs." To correct this divergence, Pigou (1920) suggested that the government should impose a tax on the factory. The tax will increase the private costs of manufacturing the good to the level where they are equal to the social costs of production. In his most-celebrated article entitled "The Problem of Social Cost," Coase (1960, pp. 1-44) challenges the Pigovian argument. Because Coase's arguments are related to the issues of land leasing, I focus on his ideas here.

One major contribution of Coase's arguments is that the liability of eliminating externalities is a problem of a reciprocal nature (Coase, 1960, p. 2; 1988, p. 96). He argues that it is not always clear if the producer of an externality should be liable for all damages caused, as economists who follow the Pigovian approach always assume implicitly. In his famous example--the rancher versus the farmer, a liability rule that prevents the rancher's strayed cattle from damaging the crops of his neighboring farmer will also inflict harm on the rancher. The rancher may have to reduce the number of cattle or move them to another location. Both arrangements will affect the rancher's rights to use and profit from his property. He suggests that the most "efficient" way to solve the problem is to allow the involved parties to establish a mutually agreed-upon scheme to share the responsibility of "internalizing" the negative externality, when the transaction costs are zero. These transaction costs include the costs of: (1) identifying the appropriate contracting parties, (2) establishing contractual agreements among participants, and (3) administering and enforcing the established agreements.<sup>4</sup> By knowing with whom to bargain, what amount to

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<sup>3</sup> I define an open-access resource as a pool of resources for which claims to the resources are not delineated, assigned, or recognized.

<sup>4</sup> I will expand these three types of transaction costs to include the costs of preserving the legitimacy and integrity of government in public land leasing later in

compensate, and how to enforce the payment, the rancher could reimburse the farmer the full value of the crops lost. Thus, the distribution of income would remain the same in the long run.

Coase then applies the concept of transaction costs to examine the allocation of property rights and its relation to resource uses. He argues that, in the world of zero transaction costs, the efficiency of resource allocation is not dependent upon the initial assignment of property rights (or liability of damages), but on the costless negotiations between the involved parties. If negotiations are costless, the relevant parties will allocate the scarce resources to individuals who are willing to pay the most for them and will thus utilize them with utmost efficiency. Coase (1959) illustrates his argument by using an example of a newly discovered cave. He asserts that whether the new cave should belong to the person who discovers it, or to the person who owns the surface of the land where the cave is located, is no doubt dependent on the law of property. This initial assignment of property rights, however, will only determine the person with whom it is necessary to establish a contract to use the cave. Once the designated rights of that person to use, benefit, and exchange are well-defined and -protected, it is the "unrestricted" exchange, not the law of property, that will direct the resource to its most valuable use. Subsequently, Stigler (1966, p. 113) extends the essence of Coase's arguments to the analysis of welfare economics and invents the term Coase Theorem. Simply put, the theorem predicts that in a world of zero transaction costs, the parties will bargain to efficient outcomes regardless of the initial legal entitlement, and the negotiation will have no effect on the distribution of wealth.

### **Capturing Land Value Through Land Contracting: A Coasian Approach?**

The problem of capturing the surplus land value is of a similar nature. Instead of dealing with a negative externality, analysts can view the socially created land value as a positive externality. Increases in land value will induce the government and

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this chapter. Hence, there are totally four types of transaction costs of land-value capture in this study.

landowners to capture this financial gain by establishing a more-defined delineation and assignment of the right to benefit from land. In delineating and assigning this right, there is always uncertainty as to who has this right and what portion of the increased land value should be allocated among the government, the community, and landowners. Assume that a government, also on behalf of a community, imposes a heavy property tax to capture the surplus land value. If the government sets the tax rate too high, the reestablishment of the public's right to benefit from the increased land value may also limit the landowners' right to profit from their properties. This action may lead to political resistance from landowners and undermine the incentives of private individuals to invest in land development. Land values may fall, and benefits from land production will decrease for both the government and private developers. If the government sets the property tax rate too low, it may not recover even the costs of constructing the public infrastructure and recoup the socially created land value for the community. As I argued in Chapter 1, a fiscal crisis and the degradation of public infrastructure and social services may emerge.

Both distributive consequences have important implications on land development. Public goods normally require heavy capital investment and thus incur high fixed costs. If the government is responsible to provide these goods, it may serve a large population. With a large quantity of production, the fixed costs per unit of services of these public goods will be low. If private developers are responsible for the provision of these services and infrastructure to a small number of residents in a neighborhood, they may incur a higher fixed cost per unit of production. Conversely, it may be more efficient for a private individual to develop his or her parcel of land. This individual may have better information than the government about how the land should be developed. If the government is responsible for all land and real estate development, it will require a strong financial capability and a huge bureaucracy to undertake and manage the massive investments. The productive allocation of land, therefore, relies on the interdependency between the public and private investments. The lack of incentive of either party to invest capital in land could impede land development and uses. The distribution of the land-value increments is an important

factor that determines the incentives and abilities for both the State and private individuals to engage in land development. A mutually agreed-upon scheme on how to divide the land benefits would, thus, have critical ramifications on the allocation of land resources.

Following Coase's arguments, a possible way to derive agreements on land-value allocation will be to allow the government and landowners to bargain, when transaction costs are zero. Indeed, land leasing is a similar approach. Land leasing from the public sector, in essence, is to contract the "multiple" rights of land from the government to private developers. In these land contracts, the government and lessees can establish explicit agreements on how to divide the future increases in land value. From a Coasian point of view, analysts argue that the assignment of the multiple land rights through land contracting may be efficient in allocating the increased land value, when transaction costs are minimal. If these assumptions hold, it will not matter whether a country establishes a private or public property-rights regime of land, because the outcomes of the bargaining involved in the exchange of property rights are independent of the initial assignments of the property-rights entitlement. Property owners (either the State or private individuals) will be able to derive the most efficient way of dividing the land-value increments by negotiating costlessly with others. In the world of zero transaction costs, policy makers and analysts will not have to worry about what types of land-tenure arrangements they should establish. Instead, they can concentrate only on formulating mechanisms, such as a "free" land market, to facilitate effective exchange and contracting of property rights of land.<sup>5</sup>

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<sup>5</sup> Although Hoffman and Spitzer (1986, 1985, 1982), Harrison and McKee (1985, pp. 653-610), Schwab (1988, pp. 237-268), and Shogren (1992, pp. 153-169) have generally supported the propositions of the Coase Theorem under the condition of zero transaction costs, other economists remain skeptical of the arguments. Samuelson (1966, p. 1411), for example, questions whether the condition of zero transaction costs will be sufficient for two negotiating parties to establish mutual agreements that maximize wealth. Bromley (1991) argues that a change in legal position affects the distribution of wealth. Because the involved parties may have different consumption patterns (or propensities to consume), a redistribution of income will alter their demands and will thus change the allocation of resources. Cheung (1978, pp. 46-49)

Following the same logic, many analysts, such as Farvacque and McAuslan (1992, p. 43) and Archer (1994, p. 24), speculate that the State can capture the future land-value increments through public land leasing.<sup>6</sup> Their assertion, however, is based on the assumption that public land leasing could be operated under the conditions of a simple two-party negotiation and zero transaction costs. These conditions, certainly, do not hold in the Hong Kong case.

In the literature, discussions of the Coase Theorem are normally confined to contracting between two private individuals under a free market condition, with the government, normally, acting as a third party to enforce and protect private property rights. Moreover, scholars also assume that resources could be reallocated to different uses easily. There are three aspects of the Hong Kong land-leasing system that deviate from these conditions. First, the government is the sole landowner and a contracting party. Because the government can control the supply of land, the bargaining position between the government and lessees in Hong Kong is not symmetrical as usually depicted in the literature.

Second, as I will show in Chapters 6 and 7, negotiations involved in land leasing could be very complex, because there could be more than two bargaining parties. In fact, the number of parties could be as large as 100. In Hong Kong, most people live in multiple-storey buildings. In such a building, an owner of an apartment is considered to be a sublessee of the lease for the land on which the building is

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also provides a comprehensive discussion of the arguments against the assumptions of zero transaction costs.

<sup>6</sup> The major distinction between the contracting approach and uses of taxes and other regulatory policies to capture the increased land value is that: while the former approach relies on negotiations on property-rights arrangements among involved parties to settle disputes, the latter is usually dependent upon the government's ability to exercise its regulatory and taxing powers. I am not implying that land contracting is a better approach to manage public land than taxation and rules and regulations. Such an analysis will require some careful comparisons between the actual experiences of managing public land under the leasehold system and other land-tenure arrangements, which is beyond the scope of this study.

erected. It is not unusual for a building to have more than 100 units; hence, the land lease for that building would have more than 100 leaseholders. Owing to this multiple-holdership of land leases, the parties involved in negotiations would be numerous.

Third, unlike the discussion in the literature that resources are easily transferable from one use to another, such as changing the land use from grazing cattle to growing crops, capital investments in land in Hong Kong are site specific. In other words, a building designed for a particular land site is not transferable to another. Demolition of the existing buildings would incur high costs. Because of the asset specificity of investments in land, lessees who disagree with the government on the terms of renewal when they try to renew their leases would not be able to reallocate their capital investments to other uses without incurring high costs. This, in turn, may undermine the bargaining position of the lessees. The government, however, does not always have a better bargaining position. If the government takes back land from lessees who cannot pay additional payments during lease renewals, the lessees may resist the government's demand by organizing public protests. Political unrest may, in turn, impede economic growth and the private incentive to invest capital in land development. Due to all these situations, it would be inappropriate to assume that the transaction costs of land contracting are insignificant in Hong Kong.

Indeed, many scholars, such as Williamson (1985), Barzel (1989), and North (1990), have followed Coase's (1988, pp. 1-16) argument of treating the transaction costs as a focus of analysis rather than assuming that they are zero. North (1990, p. 28) argues that more than 45 percent of national income in the United States between 1870 and 1970 was devoted to facilitating business transactions. These costs of transacting include expenditures on banking, insurance, finance, legal counseling, and retailing, etc. Vogel (1987, pp. 149-188), Ellickson (1989, pp. 611-630), and Donohue (1989, pp. 549-610) conducted some empirical studies of the Coase Theorem; their results show that transaction costs are high and depend on many factors, such as the number of contracting parties involved, customary rules, and the role of law in society. These scholars are not so concerned with the theoretical propositions of the Coase

Theorem. Instead, they concentrate on applying the transaction-costs concept to identify costs associated with economic exchanges. Under this framework, they compare different types of institutional arrangements in terms of their effectiveness in reducing the costs of transacting. This is the approach that I will take to analyze land contracting in Hong Kong. In the following sections, I identify the transaction costs of capturing land value through land leasing. After that, I will discuss whether or not the existing literature can help me to understand how the parties devise institutions to minimize these costs.

### **Transaction Costs of Land Contracting**

There are, at least, four types of transaction costs (or problems) of capturing the surplus land value, when land-tenure is organized under the leasehold systems. First, there are costs of maintaining the legitimacy of government to negotiate land contracts. In general, under the public leasehold systems, the government owns all land. Because the State is managing land resources on behalf of society, there may be problems associated with how citizens can ensure the State to act in their best interests. There are costs of establishing some "formal" or "informal" mechanisms to elect government officials as representatives of the community to negotiate land contracts and to prevent the excessive use of power by the elected officials. This critical point about public land leasing deserves a thorough discussion, and I will do that later in this chapter.

Second, once the legitimacy of the contracting parties is established, there are costs of defining the participants' property rights to derive benefits from the land-value increments. Under the leasehold systems, these rights are defined in the land leases. Using Hong Kong as an example, when the government leases the development rights to a private developer, both parties agree that a leaseholder must pay a "premium" at the time when the lease is first established.<sup>7</sup> The premium is determined at the public

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<sup>7</sup> Premium is money collected from land leasing, including the payment received by the government from a lessee when s/he first establishes the land contract, modifies

auction. The lessee will also have to pay an additional premium when s/he modifies the lease conditions or renews the lease. These payments, in theory, allow the government to capture the increased land value periodically. In Chapters 6 and 7, I will argue that, in practice, capturing the land value during lease renewals and through contract modifications incurs high transaction costs in Hong Kong.

Although the lessees' rights to benefit from the surplus land value are stated explicitly in land leases, there are always uncertainties that the terms of the leases cannot cover. This is especially true when information is imperfect. Changes in economic conditions may lead to a misalignment between the government's and lessees' expectations on their rights to enjoy the benefits from land development. Contracting parties must negotiate again and bear the costs of redefining their property rights of land. As I will show in Chapter 7, the contracting parties in Hong Kong did not anticipate some rapid increases in land value and, thus, argued later on how to divide these land benefits when lessees renewed their leases.

Third, there are also costs of conducting a negotiation that leads to a bargain. To avoid the potential conflicts arising from unexpected contingencies, some analysts argue that contracts should be more detailed. Yet, writing detailed contracts without ambiguity is difficult because of the limitations of language (Quine, 1960). People may interpret the meanings of a sentence differently because words possess different connotations in various contexts. Drawing up contracts with many fine distinctions may just increase the likelihood that emerging events will fall into the areas of ambiguity. This may lead to disagreements that will have to be resolved after the fact. Contracts, therefore, can never specify exactly what actions are to be taken, and what payments are to be made in all possible future contingencies (Llewellyn, 1931; Macneil, 1978, pp. 854-906).

In addition, having a land-leasing system does not automatically mean that the government and private developers will be willing to deal with each other. There has

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the lease conditions, or renews her/his lease. I will provide a detailed discussion on how the government collects the payment in Chapter 4.

to be an interdependency between the involved parties for achieving some objectives that are mutually beneficial to them. If one party does not rely on the cooperation of the other, there will be no incentive for any negotiation.

In Hong Kong, the government subscribes to the idea of public-private partnership in public land development. Although the government reserves the right to own land in order to maintain its influence over land use and development and to capture the surplus land value, it does not want its influence to subvert the incentives of the private sector to invest capital in land. At the same time, the business community and industrialists also recognize the role of the State in creating a favorable environment for their investments, such as providing sufficient infrastructure and social services to promote and support economic growth. The recognition of these interdependencies between the government and the private sector helps to bring the interested parties to the bargaining table.

Although both the government and the private sector see an opportunity for cooperation, there are still problems of evaluating costs and benefits in a transaction. If the parties possess very dissimilar views on what constitutes a cost or a benefit and how it should be measured, they must make an additional effort to reconcile these differences. A shared language for communication and a common method of assessing the costs and benefits are needed. Related specifically to the issue of capturing the surplus land value under the leasehold systems, the parties must formulate some generally agreed-upon rules of appraising the property and land values as they have been defined by the profession of real estate appraisal. These assessments, in turn, will help the government and leaseholders to determine the approximate amount of payment that lessees must pay to the State during lease renewals and modifications.

Fourth, finally, there are also costs of administering and enforcing contractual agreements. Agreements stated in the land contracts must be enforced as they impose constraints on the behavior of the involved parties. Without any enforcement, it will increase the uncertainty of whether the contracting parties will continue to observe their agreements. There must be well-established legal and administrative institutions

that help the involved parties to enforce their contracts. There are, at least, three types of administration costs. First, the government must maintain a good record of land contracts and precise boundaries. Keeping such registers and cadastral record can be expensive. Second, in order to be able to negotiate with leaseholders on lease terms, the government needs to reassess land and property values regularly. Constant reevaluation of property values is also expensive. Third, administering the land-leasing system requires expertise of the land market. Skilled administrators usually demand high salaries.

To evaluate a leasehold system, we must know whether the "benefits" derived from the land-tenure arrangements justify the "costs" incurred. In theory, quantifying transaction costs is useful in determining whether the benefits from reducing these costs outweigh the efforts and expenditures incurred. In practice, Williamson (1985, pp. 390-391) and Cheung (1978, p. 54) recognize that these costs are not always measurable. In this study, the purpose of using the transaction-costs idea is not to measure these costs of capturing the surplus land value. Instead, I am interested in examining what and how transaction costs may affect the land-value capture, and how the parties involved attempt to reduce these costs. The purpose of bringing the transaction-costs concept into my analysis is to identify potential complications in public land leasing and not to quantify them.

Owing to the inherent difficulty of measuring transaction costs, I cannot ascertain quantitatively whether or not these costs are minimized in my case studies. If these costs were measurable, I could clearly identify the magnitude of the reduction. Because I cannot quantify these costs, I assume that the parties minimize the transaction costs when they invent some mutually agreed-upon rules to enable them to transact with each other continuously. Conversely, I assume that transaction costs remain high if the parties cannot generate a new rule from bargaining, or if the negotiation leads to a stalemate so that the parties can no longer engage in further dealings.

In this study, I will show that for the Hong Kong leasehold system as a whole, the above-mentioned transaction costs do not inhibit totally the government's ability to

capture the land value through land leasing. The system has persisted for the past one hundred years. One reason, as I will argue in Chapters 6 and 7, is because the relevant parties are able to invent rules to reduce the costs of land contracting. I reviewed theories formulated by the New-Institutional-Economics scholars to explore whether they can explain the Hong Kong case. Three arguments in the literature are particularly relevant here. First, scholars argue that in order to lower the transaction costs, the involved parties will adopt a more "efficient" property-rights arrangement, such as a private property-rights regime. Second, some scholars assert that the involvement of the State would increase transaction costs. Finally, they also maintain that the judiciary system plays only a minor role in minimizing costs of transacting. In the next three sections, I explore each of these propositions thoroughly and contrast them with the actual experiences found in Hong Kong.

### **Property Rights as a Focus of Institutional Analysis**

Before the early 1960s, classical and neoclassical economists were so absorbed in their studies of the market institution that the issues of property rights received only marginal attention.<sup>8</sup> It is Alchian (1977, pp. 132-133) who introduces the legal concept of property rights as a "bundle of rights" to economists, Demsetz (1967, pp. 347-359) who investigates the origin of private property of land among Indian hunters in the eastern part of Canada, and Coase (1960, pp. 1-44) who indicates the implications of positive transaction costs on the assignment of property rights and resource allocation.<sup>9</sup> From these pioneering efforts, a vast amount of research and

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<sup>8</sup> Furubotn and Pejovich (1972, pp. 1137-1162) provide a thorough survey of the property-rights literature in economics. In their survey, there was no reference prior to 1960, and it might be possible that research on the economics of property rights did not reemerge until the 1960s.

<sup>9</sup> Alchian (1977, p. 132-133) describes the "partitioning" of property rights as: ". . . at the same time, several people may each possess some portion of the rights to use the land. A may possess the right to grow wheat on it. B may possess the right to walk across it. C may possess the right to dump ashes and smoke on it. D may possess the right to fly an airplane over it . . . And each of these rights may be

literature has accumulated.

Some scholars, such as Demsetz (1967) and Barzel (1989), argue that costs are usually incurred in defining property rights and measuring the multiple attributes of goods before people can engage in exchanges. They, therefore, assert that the definition of transaction costs will have to include the costs of delineating, assigning, and policing property rights. Under this broader definition of transaction costs, Barzel (1989, pp. 2-3) argues that, in reality, where transaction costs are never zero, property rights are never absolutely defined. Because property rights are not well-defined, some resources will be placed in the public domain. When the value of the resources increases, people will be willing to spend time and money to capture the increased value of these resources by delineating their property rights as explicitly as possible. As long as the costs of delineating and protecting property rights are not higher than the benefits captured from these increased values, exchanges between individuals will lead to a finer delineation of property rights in society. Applying this logic to the evolution of private property rights of land due to the emergence of fur trade in Canada, Demsetz (1967) argues that when farming or hunting became commercialized, the values of products increased. The relevant parties thus established exclusive rights to capture the benefits.

Following the same rationale, Anderson and Hill (1975, pp. 163-179) propose a theory of property rights to analyze the evolution of private property rights of land, water, and cattle on the Great Plains of the American West during the second half of the nineteenth century. In their analysis, decisions of actors on whether to establish exclusive rights were dependent upon the marginal costs and marginal benefits of the delineation and enforcement of property rights. If there was a fall in prices of inputs in, say, fencing, the marginal costs of exclusion would reduce and, *ceteris paribus*, generate the incentives to establish private property rights. Similarly, if the value of

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transferable. In sum, private property rights to various partitioned uses of land are 'owned' by different person."

an asset or the possibility of encroachment by outsiders increased, the marginal benefits of delimiting an explicit right to exclude would rise.

Examining the change of property-rights institutions based solely on this cost-benefit analysis will unavoidably lead to the conclusion that private property rights will be established to minimize the costs of transacting when economic activity expands. Anderson and Hill do not consider the roles of the State and other legal or extra-legal institutions in reducing the transaction costs. The omission of these factors in their analysis eliminates the possibility of other property-rights arrangements.

North and Thomas (1977, pp. 229-241) and North (1981, Ch. 7) use a similar rationale to make a broad generalization about changes in property-rights institutions in "prehistoric" times. North and Thomas (1971, pp. 240-241) describe that when human beings shifted from nomadic hunting and gathering to sedentary agriculture, there was no change in the property-rights arrangements. When plants and animals were abundant, the costs of establishing exclusive rights were higher than the potential gains. Hence, open-access regimes persisted at that time, and there was little incentive for the acquisition of better technology and learning. When population grew and the value of resources increased, private property rights emerged. With an exclusive right over resources, owners realized the direct benefits to improve efficiency and productivity. North and Thomas then argue that the establishment of private property explains the rapid progress of human history in the last 10,000 years.

The evolution of the "private-property-rights argument" is not limited to the study of early human history. Williamson (1975) studies the problems of contracting between firms. He argues that some business exchanges among independent firms involve extremely high transaction costs due to information asymmetry, asset specificity, and opportunism. To minimize these costs of contracting, a firm may acquire suppliers of its intermediate inputs and control their operations within the hierarchy of the company. The purpose of vertical integration of independent firms is, therefore, not to create a monopoly, but to minimize the costs of contracting.

One implication of his arguments on the internalization of externality, though not always feasible, is that generators of pollution can internalize the negative effects

by purchasing properties in areas that are affected by their pollution, if the transaction costs of negotiating a dispute settlement, such as compensations, legal fees, and time, are higher than the costs of buying these properties. When a polluter becomes the owner of these properties, s/he can pollute without inflicting a harm on other people. S/he will continue to pollute until the harm that s/he inflicts upon himself or herself is higher than the benefits derived from the activity that generates the pollutants. By a finer delineation of the ownership over property, the parties can resolve the conflict arising from an externality.

One common theme appears in almost all of these early studies; these scholars imply that there is a natural tendency for society to develop a "more efficient" property-rights structure to minimize the costs of transacting. This more efficient structure is, according to these scholars, private property with well-delineated private exclusive rights to resources.<sup>10</sup> Eggertsson (1990, p. 250) called this assertion a "naive theory of property rights," because it does not incorporate the influences of social and political institutions in modeling the emergence of private property. Besides, I think that the theory is also deterministic; it implies that the development of property-rights institutions will always be directed towards the private property-rights regime. It thus eliminates the possibility of the wide range of property-rights arrangements that human beings actually establish to organize production, initiate contracts, and distribute the benefits of economic activities.

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<sup>10</sup> There are, at least, three exceptions. In Cheung's (1969) analysis of three share-tenancy structures in agriculture in the People's Republic of China, he concludes that different contractual arrangements on the assignment of property rights between landlords and tenants depends on the gain from risk dispersion and have no effect on resource uses. The emergence of different land-tenure arrangements is mainly due to choices of the parties involved to minimize transaction costs under distinct conditions. Ellickson (1990) made a similar argument about risk-sharing that affects the land-tenure choices in Jamestown colony, the Israeli Kibbutz, and the medieval open-field village. Field (1989, pp. 319-345) argues that population growth does not always lead to the establishment of private property; common and private property may coexist. The choice between private and common property is dependent on the costs and benefits of exclusion.

If I apply the private-property-rights argument to the land-leasing system in Hong Kong, the rapid increases in land value and the transaction costs of land contracting should have transformed its land tenure from the public leasehold system to a private property-rights regime. If the evolution of property-rights institutions follows a predetermined path that leads to a private property rights, we must explain why the leasehold system of Hong Kong persists. North (1990, pp. 7-9) argues that "inefficient" property-rights institutions, such as non-private property-rights system, can survive for a long time; yet, the persistent of these inefficient arrangements will hinder economic development.<sup>11</sup> This is a major reason that North provides to explain the different economic growth rates among countries.

For Hong Kong, public ownership of land does not seem to impede the economic growth of this city state. In Table 2-1, I show the average annual rates of growth for selected countries in the 1970s. Hong Kong had a higher growth rate (6.9 percent) than many developing and developed countries, except Korea and Singapore. In this study, I do not attempt to establish the correlation between public ownership of land and economic growth, because the topic is beyond the scope of the research. What the Hong Kong case seems to indicate is that economic growth does not necessarily require the privatization of land, which is the most scarce and important factor of production in this city-state.

One shortcoming of these theories of property rights is the treatment of social and political institutions, such as norms and the polity, as exogenous factors and the negligence of other feasible property-rights arrangements, such as communal and public property-rights regimes, as effective institutions to minimize transaction costs.

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<sup>11</sup> North does not state explicitly that an efficient property-rights regime is private ownership. Yet, in his historical exploration of the economic development of the United States, he implies that the emergence of private property rights explains the rapid growth of this country. This renders the situation that his readers may relate all efficient property-rights institutions to private property rights. In his most recent article, North (1994, p. 366) admits that "privatization is not a panacea for solving poor economic performance" in some developing countries and the Eastern European economies.

Table 2-1

AVERAGE ANNUAL RATES OF GROWTH IN GDP PER CAPITA  
(at constant prices in selected countries)

| Country        | Period      | Annual rate of growth (percent) <sup>1</sup> |
|----------------|-------------|--|
| Korea*         | 1970 - 1978 | 8.5  |
| Singapore*     | 1970 - 1977 | 7.0  |
| Hong Kong*     | 1970 - 1980 | 6.9  |
| Taiwan**       | 1970 - 1974 | 5.4  |
| Indonesia*     | 1970 - 1978 | 5.1  |
| Japan*         | 1970 - 1978 | 3.7  |
| Philippines*   | 1970 - 1980 | 3.3  |
| West Germany*  | 1970 - 1978 | 2.4  |
| United States* | 1970 - 1978 | 2.2  |
| Britain*       | 1970 - 1978 | 2.0  |

Source: \*Cheng Tong Yung. 1982. The Economy of Hong Kong.  
Hong Kong: Far East Publications, p. 132.

\*\*Lethbridge, David G. 1980. The Business Environment  
in Hong Kong. Hong Kong: Oxford University Press, p. 5.

Note: (1) These annual growth rates are ranked in descending  
order.

Because of these problems, the arguments provided by the above-mentioned scholars are not helpful for me to understand the Hong Kong case. If the transformation of property-rights arrangements is not the answer for how the transaction costs of capturing land value in Hong Kong are reduced, the parties must rely on other institutional arrangements. I discuss the role of the State in the next section.

### **The New-Institutional-Economic Analysis of the State**

There are two reasons why I examine the role of the State in public land leasing. First, under the public leasehold systems, the State normally will be the landowner and thus manages all uses and the supply of land. If a government does not represent public interests, delegating the ownership of public land to the State may create opportunities for corruption and misuses of power. The State's effectiveness in allocating land-value increments and its integrity in upholding public interests are crucial.

Second, the State as a contracting party will affect the other three transaction costs. If the State has the uncontested power to assign the property rights of land, impose its will during the negotiation, and ignore sanctions against noncompliance to the contractual agreements, land contracting may not provide the necessary mutual gains and incentives to private developers to continue dealings with the government. In private land contracting, for example, there are existing legal doctrines and conventions that define the process of contract making and the enforcement of contractual agreements. There is also a "third-party"--presumably the government and/or a judiciary system--that will enforce these rules. If the government is a contracting party, this may create a "third-party problem." The party that designs and enforces the rules of contracting is also the bargaining party involved in contracting.

Analysts may argue that the "government" in most countries is not a monolithic entity. In the United States, various branches of government are responsible for the legislative, administrative, and judicial operations. The separation of these responsibilities, to some extent, creates a system of checks and balances. Yet, in some developing countries, the balance of governmental power is usually not well

established. In this circumstance, when the government engages in land contracting, it may have the ability to define and modify rules and can dictate the process and the terms of exchange. If one party has a better bargaining position than the other party in land leasing, the outcomes of negotiation may not necessarily be mutually beneficial to all involved parties. This unequal power in contracting is particularly problematic when government officials are only concerned with the pursuit of self-interest. These officials may sacrifice the public interest for handsome bribes.

Most scholars are skeptical of state intervention; scholars writing in the New Institutional Economics are no exception. Most analysts conclude implicitly that government intervention will increase transaction costs, if we include the costs of safeguarding the State from formulating inefficient rules to intervene in the allocation of resources. Indeed, one of the reasons why Coase's arguments have attracted so much attention is that they question the wisdom of the Pigovian tradition. As I have mentioned earlier, Pigou (1920) argued that government intervention is required to correct the divergence between marginal private and marginal social costs in society as markets fail to incorporate the social costs of production and consumption into the decision rules of individual behavior.

Coase (1960), on the contrary, argues that government actions that are not subjected to the "discipline" of markets may lead to inefficiency. He urges that analysts should always weigh the benefits of government intervention against its costs. If the government's action generates more harm than good, society will be better off without the intervention. Some scholars who follow Coase's argument derive too hastily the judgment that the government should play a minimum role in the economy, except to protect private property rights by maintaining the courts and orders in society (Cheung, 1978, pp. 62-64; Burton, 1978, pp. 71-91; De Alessi, 1980, pp. 1-47). An evaluation of the costs and benefits of government involvement is not always carried out by scholars carefully.

The two different attitudes towards the State between the Pigovian and Coasian traditions create an interesting dichotomy. On the one hand, Pigou implied that the State is fully informed in estimating the divergence between the private and social

marginal costs and calculating the marginal tax. On the other hand, some scholars argue that the State is totally ignorant in dealing with the problems (Buchanan, 1984, pp. 159-173). Apparently, Coase (1988, pp. 118-119) is correct in emphasizing that scholars must examine explicitly the costs and benefits of state intervention in economic transactions in their analyses rather than assume that state action will increase transaction costs and reduce social welfare. In the next section, I review why some scholars believe that there is an inherent problem of state involvement in the assignment and enforcement of property rights.

### **The State and Property Rights**

As I argued earlier, when transaction costs of contracting property rights among individuals are not zero, an impartial third party may be needed to safeguard any opportunistic behavior of participants in exchanges.<sup>12</sup> Whether or not the State can eliminate opportunistic behavior will depend on enforcement. To have a credible and effective enforcement mechanism, the parties involved must surrender part of their rights and delegate certain power to the enforcer. For instance, we must pay taxes to the government so that it can set up a judiciary system and a police force to protect our property. Besides, we sometimes subordinate part of our liberty and rights to the decisions of the courts in settling disputes.

These power relationships between the State and its constituents create the fundamental dilemma: a government that is strong enough to protect private property is also capable of confiscating the wealth of its citizens (Hobbes, 1928; North, 1981, p. 20; Weingast, 1993, pp. 286-311). Moreover, when a political system becomes more complex, the power that citizens delegate to officials will be further assigned to bureaucrats who work at different levels of government. Within an intricate system of assigning power and duties to elected officials and their agents, how can the principles

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<sup>12</sup> Certainly, there are other institutions, such as social norms, that can prevent the contracting parties from violating the contractual agreements (Ellickson, 1991; Williamson, 1985). In this section, I focus on the role of the State as a third party to lower the chance of opportunistic behavior.

(citizens) ensure that their agents (bureaucrats) will make decisions that serve their interests? Political scientists and economists, such as Brennan and Buchanan (1985), Buchanan (1985, 1991), March and Olsen (1989), Ostrom (1987; 1993, pp. 43-68), and Moe and Caldwell (1994, pp. 171-195) have argued for the establishment of a constitution to restrict the power of the State. Other scholars, such as North (1981, 1990) and Weingast and Marshall (1988, pp. 132-163), have applied the concept of transaction costs to examine these political problems.

North (1981, pp. 20-32) asserts that the study of property rights cannot be divorced from the State. In his analysis, North follows the assumption that government officials are interested only in maximizing their own "rents" (Tullock, 1965; Krueger, 1974, pp. 291-303). According to North, a rent-seeking ruler has two objectives. The first is to establish a structure of property rights that facilitates economic exchanges and growth in order to accumulate rents for the ruler. The second is to provide public goods and services, such as law, justice, and defense, designed to lower the costs of specifying, negotiating, and enforcing contracts. The lowering of transaction costs will promote economic growth and, in turn, expand the tax revenue for the State.

North (1981, p. 28) argues that the first objective is, however, inconsistent with the second. A rent-seeking ruler may not always supply appropriate public services to lower transaction costs. Instead, to maximize rents and maintain its power, a State may tolerate and even contrive an inefficient property-rights institution that favors the politically powerful groups in society. In the absence of enforceable private property rights, there will be no incentive for individuals to invent new knowledge and adopt them to create more efficient production processes. Inefficiencies may occur and, in turn, hinder the development of an economy.

North (1993b, p. 11-12) argues that "throughout most of history and in much of the present world, institutions have not provided the credible commitment necessary for the development of low-cost transacting in capital and other markets." Using this logic, he then explains why some economies suffered from prolonged stagnation,

whereas economies in the Western World that were built upon some democratic political structures and private property could experience rapid growth.

Similar to North's argument, Libecap (1989, pp. 115-116) sees the State as a vehicle for the political influential groups of a society to protect their property rights. If the distributive consequences of the institutional change will jeopardize the welfare of the powerful groups, they will lobby politicians to block the change. Politicians who try to maximize votes and political and financial support will be more responsive to demands from the most influential interest groups. In analyzing the allocation of "common" resources, such as oil reservoirs and federal mineral, timber, and range land in the United States, he finds that legal precedents and the prohibition of defining exclusive rights to natural resources are mostly outcomes of lobbying congressional politicians and government officials by various interest groups. These lobbying efforts make any modification of property-rights institutions difficult.

Scholars have proposed the idea of federalism to ensure the representation of the government and to limit its power (Tiebout, 1956; Weingast, 1993). Even under such a system, there are still problems of constraining the State to play a role of protecting and enforcing property rights and not abusing its power in pursuing its own interests. These problems include "political free ridership" (North, 1981, p. 31), transaction costs of "logrolling" or "vote trading" (Shepsle, 1989, 131-147; Weingast and Marshall, 1988, pp. 132-163; Becker, 1983, pp. 371-400; Tullock, 1981, pp. 189-202), and the inflexibility of the Congressional committee system to meet the change in public preferences (Shepsle, 1992, pp. 245-263).

The problems of creating a polity with a system of checks and balances seems, at least according to the above-mentioned scholars, intractable. North (1993b, pp. 11-23), Williamson (1994), and Shepsle (1992, pp. 245-263), argue that "credible commitment" is the fundamental issue.<sup>13</sup> At present, there has been very little

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<sup>13</sup> Shepsle (1992, p. 247) has proposed a very interesting definition of credible commitment: "A commitment is credible in either of two senses--the motivational and the imperative respectively . . . a commitment is credible in the motivational sense if subsequently (at the time of performance) the committee continues to want to honor

progress in postulating a theory or proposing some practical programs that can help policy makers to build an accountable and effective government. As North (1994, p. 366) indicated in his 1993 Nobel Prize lecture:

Polities significantly shape economic performance because they define and enforce the economic rules. Therefore, an essential part of development policy is the creation of polities that will create and enforce efficient property rights. However, we know very little about how to create such polities.

The current difficulties that scholars and analysts are facing in reforming the political and economic institutions in Russia and some Central and Eastern European countries are examples. As the 21st Century approaches, the problem of public commitment remains a continuing challenge.

As some scholars are struggling with the issues of creating institutional mechanisms to bind officials to their commitments of pursuing public interests, others are searching for alternatives from a totally different direction. There is growing dissatisfaction with the assumption that the pursuit-of-self-interest doctrine uses to depict the nature of human beings (Sabel, 1993, pp. 80-86). Some scholars, such as Polanyi (1944), Granovetter (1985, pp. 481-510), and Tandler and Freedheim (1994, pp. 176-209), argue that human beings do not always seek to maximize their own well-being. Instead, whether they will behave as rent-seekers or public-minded beings depends on the context in which they "socialize" with each other. According to these scholars, many of our economic and social behaviors are "embedded" in social norms (Granovetter, 1985).

### **The Hong Kong Government**

Although all these ideas show how a country under a democratic political system may restrict the power of the State, they do not provide an explanation for the

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that commitment; a commitment is motivationally credible because it is incentive-compatible and hence self-enforcing. It is credible in the imperative sense, on the other hand, if the committee is unable to act otherwise, whether he or she wants to do or not . . . because performance is coerced or discretion to do otherwise is disabled."

Hong Kong case. The Hong Kong political system is not founded on democracy (Miners, 1991). The Governor of Hong Kong is not publicly elected. In addition, there is no explicit statement in the Constitution of Hong Kong that requires the Governor to seek consent from or consult with members of the legislative and administrative councils when he decides on a piece of legislation and other public policy. The judicial system plays no role in constraining the power of the Governor. In the past, courts never struck down any legislation. Ordinances were disallowed, but this was due to a political action taken by the British Parliament in London and not a decision made by judges in Hong Kong (Miner, 1991, p. 59). In sum, there is no formal mechanism of checks and balances against the power of the State in the Hong Kong political system.

Given these characteristics of the Hong Kong government, the theories of the State provided by the property-rights school would predict that the government could exploit its control over public land by extracting as much rent as possible from leaseholders. The government could act as a predator or allocate land benefits only to the powerful interest groups to maintain their support for the regime. In Chapter 6, I will show that this prediction did not materialize empirically. Despite the fact that the government is endowed with tremendous political and legal power, lessees are able to express their dissatisfaction with the government land policy through litigations and public protests with varying degree of success.

The major deficiency of the New-Institutional-Economic theory of the State in explaining the Hong Kong situation is that scholars perceive the State either as being a predator or an instrument of oppression of one class by another. Because they assume that power is the key element of social control, the State that is the enforcer of the formal rules is believed to be extremely powerful. Yet, there are always opposing views in every sphere of our life. No matter how oppressive a political regime is, there are countering forces that attempt constantly to undermine the power of an

exploitative government.<sup>14</sup> The task at hand is to understand how the interplay of these forces solves (or complicates) the problems of social and economic exchanges. I will show in this study that the capability of the State to capture the land value does not depend solely on the exercise of governmental power or the legal power of being a landowner. Instead, the outcomes of the capture are also dependent upon the strategies that lessees used to resist the government's demands. I will discuss these strategies in detail in Chapter 3.

Another institution that the New Institutional economists and other scholars have studied in related to the minimization of transaction costs is law. Law is related closely with the issues of the State and private property rights. According to Hobbes (1928, p.94), the enforcement of law must require "some coercive power to compel men equally to perform their covenants," and he assumed that the State will exercise this power. Bentham also (1978, p. 51) asserted that "property and law are born together, and die together. Before laws were made there was no property; take away laws, and property ceases." I investigate the role of law in minimizing transaction costs in the Hong Kong case next.

### **Laws and Transaction-Costs Minimization**

The roots of the movement for combining the study of law and economics dated back to the 1950s when antitrust law, corporate law, public utility regulation, and federal taxation were brought under the scrutiny of economics (Posner, 1993, pp. 82-85). At that time, economists rediscovered the importance of legal institutions; and the legal profession was attracted by an experimental theory of institutional analysis based on economic reasoning. This trend shifted the attention of some economists to the writings of political economists, such as Thorstein Veblen and John R. Commons (Rutherford, 1990). Commons (1934) recognizes the potential conflicts that emerge

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<sup>14</sup> See De Soto (1989) and Razzaz (1993, pp. 341-355) for some examples of how citizens who appear powerless in society challenge the land and housing policies of the state in Jordan and Peru.

from collective actions and asserts that the reconciliation of these conflicts is dependent on the interaction between individuals and collective decision-making processes of which governmental and judicial institutions play some important roles. According to Coase (1988, pp. 119-120), when transaction costs are positive in contracting, the parties may rely on laws to settle disputes arising from economic exchanges. Inspired by the works of Commons and Coase, scholars have developed a new area of study called "Law and Economics."

Many scholars have examined the role of law in contracting. Macaulay (1963, pp. 55-69) investigates the contractual relationships among businessmen in Wisconsin and finds that "non-contractual" relations dominated the commercial practice in this community. Non-contractual relations, as defined by Macaulay, are based on: (1) general written agreements that cover as many foreseeable contingencies as possible and (2) non-legal sanctions to induce desirable performance. Businessmen, in his study, find formal contract and contract law unnecessary because nonlegal sanctions, such as commitments to honor promises and produce high quality commodities, exist. With repetitive dealings, the reputation of upholding these commitments becomes the most important asset of a business person. The protection of one's reputation, in turn, acts as an effective enforcement of acting responsibly to pledges and quality in business transactions.

Following a similar argument, Williamson (1979, pp. 236-238) asserts that "relational," instead of detailed, contracts are more often used in business agreements. Because the involved parties cannot foresee all future contingencies in contracting, most contracts are incomplete and imperfect documents. He maintains that the parties usually insert some "general clauses" in the contracts that form a framework of contemplating means to settle unexpected disputes. Under these clauses, parties will try to use bilateral efforts or arbitration rather than court ordering to resolve conflicts. Even if the bilateral efforts and arbitration fail, Williamson emphasizes that the contract laws and courts are still deficient in dealing with problems of contracting among firms because judges are not better informed about the nature of the dispute than the parties involved. Knowledge about the circumstance and plausible solutions

can only be communicated to the court at great costs. He proposes to reorganize the horizontal networks among firms that supply and consume each other's products into a hierarchical structure. The hierarchy of the firm would then become its own court of appeal.<sup>15</sup>

In his study of how members of a small community in Shasta County of California handle the "classic" cattle-trespassing disputes, Ellickson (1991, pp. 280-282) finds that the presence of transaction costs leads people to ignore, rather than resort to, law. The social norms within this community emphasize the notion that being a "good" neighbor is to settle disputes "informally." These norms, in turn, make residents pay little attention to law. It is costly to obtain information about laws and to settle disputes in courts in an isolated place such as the Shasta County. Local residents, therefore, decide to solve their communal problems based on social norms.

In this study, I will show that law plays a "mixed" role in reducing transaction costs of allocating the land-value increments. In settling the disputes over the allocation of the increased land value, courts' rulings did not dictate the outcome. Although judges found that the Hong Kong government had the legal right to demand a large payment from lessees for renewing their leases, these legal decisions were challenged in the political sphere. Despite backing from the judiciary system, the government, eventually, had to yield to the demands of the public.

When lessees could not agree among themselves on the conditions of renewing their land contract with the government, the government legislated a new law to reduce the costs of negotiation. At present, the avoidance of the government to exercise its legal power remains as a major incentive for the lessees to work out an agreement among themselves. Simply put, in the Hong Kong case, law appeared to play no significant role in minimizing transaction costs in one of my case studies, but

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<sup>15</sup> Williamson's arguments do not ignore norms as a major mechanism for private ordering. The "corporate culture"--norms of the entity--will certainly determine when parties involved in a dispute will appeal to a higher authority within the company or will "work things out" themselves.

were effective in doing so in another. I will discuss all these cases thoroughly in Chapter 7.

### Summary

In this chapter, I expand the transaction-costs concept to include the costs of preserving the government's legitimacy to act as a contracting party in leasing public land. With the extension, I identify four types of transaction costs in capturing surplus land value. In reviewing the literature on how the evolution of the property-rights institution, the State, and law can reduce (or increase) these transaction costs, I found that answers provided by scholars cannot explain fully the situation in Hong Kong.

First, I question the argument that the evolution of private property rights is a natural tendency towards the reduction of transaction costs in economic exchanges. In short, the contracting parties can only minimize costs of transacting by establishing private property rights. In this study, I will show that in Hong Kong where land is under public ownership, the government who is the landowner also has the incentive to minimize the costs associated with the capturing of the increased land value. Put differently, public land ownership does not necessarily mean transaction costs of land-value capture are high, and the incentive to lower them is absent.

Second, I reexamine the argument of the State as an institution in increasing transaction costs. Scholars of the New Institutional Economics usually implicitly or explicitly conclude that government intervention will create high transaction costs. According to the theory, the transaction costs of land leasing in Hong Kong would be high and insurmountable, because the Hong Kong government, as a landowner, has exerted tremendous influence over the allocation of land and land-value increments in this city-state. Government intervention would have distorted the distribution of land benefits and prohibited profitable land transactions. I will show in Chapter 6 that this argument does not seem to apply to Hong Kong.

Third, the discussion of law in the literature as an institution to reduce transaction costs also provides a partial explanation for the Hong Kong experience. Scholars believe that laws and the courts are deficient in dealing with the problems of contracting. In the Hong Kong case, the resolution of the conflict arising from the

distribution of land value was not solely based on the court rulings. This seems to affirm this argument. Yet, when negotiation costs among lessees on the terms of lease renewal were high, the law becomes important in reducing these costs.

Although these theories do not explain the role of institutions in lowering (or increasing) transaction costs, it does not mean that these theories are wrong because Hong Kong is a special case.<sup>16</sup> These theories just do not account for the unique processes of how the parties in Hong Kong reduce the transaction costs of allocating the increased land value. I develop an analytical framework in the next chapter to study these processes.

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<sup>16</sup> One peculiarity of Hong Kong is that its government is British, and its economic communities are largely Chinese. As I will show in Chapter 6, the separation of political from economic interests was easier to achieve under such conditions. The British may have perceived a greater benefit from stimulating a vibrant Chinese economy in Hong Kong than from attempting to dominate it.

## CHAPTER 3

### ANALYTICAL FRAMEWORK

In this chapter, I develop an analytical framework to analyze how the contracting parties in Hong Kong used different strategies to reformulate rules so as to minimize transaction costs and why they chose these strategies. I select four strategies that the parties employed individually or jointly to influence rule revision. They are "exit," "voice," "persuasion," and "coercion," which were the key tactics that the government and lessees used in the Hong Kong case. (I will define and discuss each of them in detail later.)

There are two reasons why a framework is needed. First, to understand the *process* of how the parties selected their strategies when they faced different transaction costs and institutional constraints, I need a framework to help me to ask questions about the context and then identify the strategy that the parties used to reduce transaction costs. Second, not only does the framework assist me to identify various possible strategies, the knowledge about the potential consequences associated with each strategy could have important policy implications. If a strategy can lead to a more desirable outcome than the other tactics in a specific situation, government officials can establish policy to make that strategy more attractive and the alternatives less appealing to the contracting parties. In this way, officials may be able to shape the outcome of their land policy initiatives.

I base my framework on the work of Hirschman (1970); therefore, I first explain the connection between Hirschman's ideas of exit and voice and the issues of minimizing transaction costs in the Hong Kong case. Second, I modify Hirschman's exit-voice concept and argue for the incorporation of persuasion and coercion in his framework.<sup>1</sup> Third, I show that the choice of strategy at the operational level is

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<sup>1</sup> Many scholars, such as Libecap (1989, pp. 10-28), North (1993a, pp. 35-46), Ostrom (1990, pp. 182-216), Feeney (1993, pp. 159-212), and Polenske (1995) have developed various frameworks to analyze institutional change and property-rights relations. Not all of them focus explicitly on the different strategies that the involved parties use to change institutions and lower transaction costs. Hence, I decided to use a modified exit-voice framework.

restricted and determined by the existing collective and constitutional rules. At the end of this chapter, I combine the transaction-costs concept with the framework developed here and explain how I will apply them to examine land-value capture in Hong Kong.

### **Hirschman's Exit-Voice Concept and Institutional Change**

In his book entitled Exit, Voice, and Loyalty, Hirschman (1970, pp. 120-126) illustrates how the interplay of exit and voice shapes the behavior of firms and political organizations. Economists have typically assumed that consumers express their dissatisfaction with an organization's products by withdrawing their demand (exit). Political scientists, on the other hand, think that the same dissatisfaction could be articulated through protests (voice). Hirschman skillfully brings these two strategies into one framework and explains how the relevant parties can combine them to convey their grievances more effectively to decision-makers of a deteriorating organization. More importantly, he argues that exit could be a dominant mechanism over voice in some conditions and vice versa at the others. (I will discuss Hirschman's exit-voice concepts in detail later in this chapter.)

Hirschman's framework is very useful in studying institutional change because it covers explicitly the context in which an actor selects a specific strategy to revise rules and examines the effectiveness of her/his strategy in shaping other people's behavior and decision. Many scholars have applied Hirschman's framework to analyze various social and political issues including union bargaining (Freeman and Medoff, 1984); administration of both health and educational services (Stevens, 1974); movements of labor and capital as political actions (Hunting and Nelson, 1976; Hirschman, 1993, pp. 173-202); formation of political parties (Hirschman, 1981); marriage and divorce (Hirschman, 1992, pp. 77-101); adolescent development (Gilligan, 1986, pp. 283-300); and politics and development (Peattie, 1994, pp. 118-130).<sup>2</sup> In this study, I add to this list by applying a "modified exit-voice" framework

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<sup>2</sup> See Hirschman (1992, pp. 77-101) for a summary of some applications.

to examine how the parties minimize the transaction costs of land-value capture in Hong Kong. To show that the exit-voice idea is applicable to the Hong Kong case, I relate it to the issues of transaction costs in the next section.

### **Exit, Voice, and Transaction Costs**

Hirschman (1992, pp. 85-87) indicates the usefulness of applying his exit-voice idea to analyze whether economic activity should be conducted in the markets or within an hierarchy of a firm--a central issue in the studies of the New Institutional Economics. Williamson (1975) and Joskow (1991, pp. 51-83) argue that when the transaction costs of contracting--information asymmetry, opportunism, and asset specificity--are high, a firm will organize its manufacturing activities within its hierarchy rather than subcontracting them out to an independent firm.

A reformulation of the issue in terms of Hirschman's exit-voice framework yields some interesting insights to the argument. Assume that a company subcontracts part of its production to an independent firm, if the subcontractor does not perform according to the contract, the company can employ three strategies to correct the problem. First, the company can terminate its contract with the subcontractor (exit) and engage in another contracting relationship with another independent firm. Because of imperfect information in drafting contracts, considerable apprenticing of the subcontractor by the company, and dishonesty in revealing production problems, the strategy of exit will never be effective in disciplining an independent subcontractor.

This leads the company to the second option--Voice. The firm may acquire the subcontractor and turn it into a subdivision of the company. With the operation of the subcontractor under the control of the firm, complaints about bad performances could be resolved within its hierarchy, such as appealing to the top management.

Hirschman (1970, Ch. 7) proposes a third option--voice with the threat of exit or loyalty. The company may feel a sense of loyalty and responsibility towards the subcontractor and is willing to continue its dealing with the subcontractor on the condition that it must improve its performance. Because of loyalty, the strategy of total abandonment or voice would be replaced by the combination of the two. The

contractor will continue to use voice to try to improve the performance of the subcontractor. If the performance continues to deteriorate beyond a certain threshold, the contractor will terminate the contractual relationships. Loyalty, therefore, will avoid overrapid exit and, in turn, give the subcontractor an opportunity to correct her/his problems.

Hirschman's proposal depicts better the contractor-subcontractor relationships in reality where monitoring of the parties performance is neither totally based on competition in the markets nor the supervision within the hierarchy of a firm (Sabel, 1993, pp. 65-123). Trust relations, commitments, and reputation are elements that allow the contractor-subcontractor relationships go beyond the extremes of "make" and "buy" (Helper, 1991, pp. 781-824; Sabel, 1992, pp. 215-250). While the New Institutional economists identify the transactions costs of organizing production and provide an "idealized" solution based on cost-benefit analysis, Hirschman articulates different strategies of reducing transaction costs and the possible outcomes associated with each tactic. The former focuses on rationalizing the problems and plausible solutions, the latter concentrates on the process of how the involved parties resolve the predicaments.

### **Exit-Voice Framework and Land-Value Capture in Hong Kong**

The exit-voice framework is applicable in explaining part of the experience of land-value capture in Hong Kong. One reason why the government failed to capture the land-value increments during lease renewals was because of the high transaction costs of delineating its and the lessees' rights to benefit from land. According to the agreements established in the "renewable" land leases before the 1970's, the government could set rent for lease renewal based on the full market value of the leased land. (I will explain what a renewable lease is in Chapter 4 and provide a detailed account of the controversy in Chapter 7.) Owing to some unexpected rapid increases in land prices, lessees whose leases were up for renewal would have to pay an annual rent many times larger than the original amount. Because of this huge increase in land rent, the government and the lessees disagreed on what the appropriate

amount of rent for lease renewal should be. Negotiations involved in contract renewals between the parties became problematic.

Unwilling to pay that rent, lessees tried to challenge the government's demands. According to the exit-voice framework, the lessees could employ two strategies. The first was exit, that is, to terminate the contractual relationship with the government by not renewing their leases. This strategy would incur a very high cost for the lessees. As I stated in Chapter 2, capital investments in land were asset- and location-specific, because the design and the use of a building were usually tailored towards the location and size and shape of the land. If a lessee did not renew the contracts, s/he had to revert the land to the government. Although the government would compensate her/him for the structure erected on the leased land, negotiation costs, such as legal fees and time, of determining the amount of compensation and relocation expenses could be high. In this situation, exit would not be a viable option.

The other strategy was to challenge the government authority by appealing to the courts (voice). After several legal battles, the Privy Council in London--the highest judicial body under the Hong Kong legal system--finally ruled that the government had the legal right to determine the rent for lease renewal. Although the government won the case, the outcome did not resolve the dispute. As the government continued to charge a high rent to lessees, its policy began to affect more leaseholders whose leases would expire soon. Because all these lessees faced the same possibility of paying the high rent, the situation created a favorable environment for the lessees to organize public protests, which is another form of voice. As the criticism towards the government lease-renewal policy grew stronger, some business groups threatened to relocate their operations overseas if the increases in rent would be passed on to them in the form of high labor and capital costs. The combined strategy of public protests (voice) and possible capital flight (exit) was effective in forcing the government to change the rule of calculating the land rent for lease renewal.

Although Hirschman's exit-voice framework is useful in identifying the lessees' strategy to revise the rules of land contracting, there are, at least, two issues that his framework does not cover. First, his framework does not include the strategy that the

lessees employed to enlist more people to join their protests. The effectiveness of public protests depends on the number of participants. How did the lessees encourage others, such as the business community and politicians, to join their protests? An explicit consideration of this matter in a framework will help me to understand when and why collective actions that determined the outcome of land-value capture were possible.

Second, his framework does not lead me to examine why the government yielded to the public pressures. I do not know what strategy the government used to counter the challenges of leaseholders and why its strategy failed. To incorporate these issues in my analysis, I must expand the exit-voice framework.

### **Extension of the Exit-Voice Framework**

In applying Hirschman's framework, I make two modifications to its original structure. First, I introduce persuasion and coercion as two other tactics. Second, I add to the framework the three levels of analysis proposed by Kiser and Ostrom (1982, pp. 179-222) and Ostrom (1990), namely the operational, collective-decision, and constitutional levels. Before I explain the reasons for these changes, I restate briefly Hirschman's original ideas of exit, voice, and loyalty.

### **Exit, Voice, and Loyalty**

In commodity exchanges, as I stated earlier, exit means that a person withdraws from a transaction with a firm, because normally a better good or service is available from other companies. Hirschman argues that exit is a "recuperation mechanism" that consumers use to discipline managers who perform "badly." If Firm A charges a higher price than its competitors, the well-informed consumers will leave Firm A (exit) and buy from the other firms. The exit of one individual does not necessarily generate pressure for change, because the loss of revenue will be insufficient to induce any reconsideration of the firms' present business practice. Only when more customers shift to its competitors will Firm A attempt to improve efficiency to avoid bankruptcy.

The use of exit to influence decisions and behavior is not limited to transactions carried out in the markets; it can also be applied in social and political exchanges. People may migrate to other countries because of the deteriorating economic and political conditions of their home country, provided that there is no restriction on migration. Hirschman argues that total abandonment would undermine voice and not improve the performance of a country or a political organization. Instead, it may lead to a further deterioration of the troubling conditions. For example, if dissents leave voluntarily or involuntarily a repressive country, the force to challenge the existing regime will be weakened and eventually dissolved. Without any political resistance, the government may become more, rather than less, oppressive.<sup>3</sup>

Unlike exit that may impair the chance of recovery of a deteriorating organization, voice would normally improve the performance by providing a direct feedback to the organization. According to Hirschman (1970, p. 30), voice is the attempt to change the management through individual or collective petitions, appeals to higher authority, or public protests. Voice, as Hirschman infers in his writing, is the expression of dissatisfaction in the form of confrontation. Thus, although voice is more effective than exit, it is neither pleasant nor easy. It may even be dangerous, because many governments may not be willing to accept criticisms brought forth by their citizens (Hirschman, 1992, p. 79). Besides, the effectiveness of voice is dependent upon its "volume." Decision makers of a firm or a political organization may not listen to a grievance unless the issue is conveyed to them collectively. In comparison to exit, which is impersonal and requires no coordination, voice is costly in terms of effort and time to organize.

The combination of exit and voice as a strategy can either supplement or contradict each other. If exit is used as a threat to improve performance, it will reinforce voice. Boycott is an example. I mentioned earlier that abandonment will

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<sup>3</sup> In his study of the political changes that occurred in East Germany in 1989, Hirschman (1993, pp. 173-202) reformulates his original argument by arguing that out-migration (exit) of East Germans to the West reinforced protest against the regime (voice).

undermine voice. Yet, Hirschman (1970, pp. 76-105) stresses that total abandonment is impossible because of loyalty. Loyalty is a sense of belonging, trust, and responsibility that members possess towards an organization or a country. This attachment will delay immediate exit even though conditions are degenerating. If the loyalty is not "blind," loyalists will try to improve the situation through voice.

### **Persuasion**

Although Hirschman discusses the role of loyalty in reshaping the performance of an organization, he does not show how this sentiment is developed among members. Hirschman does not explain the process of how the parties generate a trust relation and shared understanding among themselves and, in turn, become loyal to the group. Indeed, the usage of voice in Hirschman's discussion has already limited the possibility of loyalty. The emphasis on voice as a confrontational strategy implies that the parties cannot derive consensus over disagreements through persuasive communication and "reflexive discussion" (Lindblom, 1970, Ch 4; Habermas, 1984; Sabel, 1993, 1994). Persuasive communication and reflexive discussion promote mutual intelligibility and realignment of conflicting interests. Instead of raising voice to one another, some scholars, such as Lindblom (1970), believe that people can reconcile differences through writing, reading, talking, listening, acting, and observing. If people communicate to influence each other's opinion or behavior, communication must be persuasive. Talking is not a persuasive communication unless person A can: (1) convey her ideas to person B clearly, and (2) convince person B that the conversation has important meanings and, thus, shape his or her behavior. In essence, persuasion is an indispensable element in communication and reflection if it is employed as a strategy to shape people's actions (Lindblom, 1970; Sabel 1993).

I would argue that persuasion is one of the key strategies to generate loyalty. In the business world, corporations use persuasive advertisements to create consumers' loyalty towards their products. Politicians use propaganda, consultation, advice, and education to engender trust relations with the public. The President of the United States makes regular speeches in radio and television to solicit political supports for

his proposed policy. By persuading the majority of the public that his policy is in their best interests, the President may convince legislators who need votes from the public to pass the bill in the Congress.

Persuasive communication is often used even in an authoritarian regime. A dictator may try to establish blind trust by molding the minds of his or her subjects through broadcasting, pageantry, and education. Hitler made as many as fifty broadcasts to indoctrinate his ideas of racial supremacy and Nazism into the minds of the German masses (Lindblom, 1977, p. 53). In Communist China, Mao spoke for egalitarianism and the creation of the "new men." Without convincing the public that duty, patriotism, and communal spirits would lead the country to modernization and prosperity, the communist party would have to rely on other systems of social control, such as coercion, to mobilize the huge population. These connections between persuasion and loyalty is absent from the discussion in Hirschman's book.

Hirschman also does not discuss the role of persuasion in enhancing voice. O'Donnell (1986, pp. 251-252) identifies this issue and draws the distinction between "vertical" and "horizontal" voices. Vertical voice is the conveyance of discontent to "the top" through public protests. Horizontal voice is the utterance and exchange of opinion and concern among citizens. Horizontal voice is a necessary precondition to mobilize vertical voice, because the effectiveness of public protests is dependent upon the number of participants. Organizers, therefore, must persuade more people to join their rally using horizontal voice. The more persuasive is the cause of their appeals, the larger the number of people who will join. More supporters will, in turn, engender the necessary "power" for them to shape public policy.

In the Hong Kong case, persuasion played an important role in shaping the outcomes of land-value capture. For the conflict arising from lease renewal that I discussed earlier, protestors used the mass media effectively to convince the public and other major business groups that the new rent charged by the government was unreasonable. As the number of participants in the protests grew larger, the government's authority over its claim on the increased land value was undermined. A

complete explanation of the result of this incident, thus, requires the incorporation of persuasion as one of the strategies in my framework.

### **Coercion and Voice as Power Relation**

I argue that power as a social relation is partly imbedded in the concept of voice in Hirschman's discussion. He concentrates mainly on the vertical voice that represents complaints, protests, and appeals to a higher authority from the public, which is the use of power exerted from the civil society. Voice from the civil society, however, is only one kind of power execution.

Power, according to Foucault (1978, pp. 92-94), can be exercised from innumerable points, and there is no one system of domination. Power relations exist within the family and workplace, between gender, among races, etc. Whenever a person misuses her/his power, the action may generate resistance from other people. Because power can be exerted from different spheres in society, such as the State or the civil society, resistance is not confined in one single domain (Foucault, pp. 95-96). Bowles and Gintis (1987, p. 97) provide a similar definition of power:<sup>4</sup>

Power is the capacity to render social action effective. It is coextensive with neither the state, nor with physical force, nor with fact-to-face command. Power may be exercised through the ability to overcome the resistance of others . . . but it may equally be exercised through the ability to avoid resistance.

Using this definition, the State can also exercise power to achieve its objectives in society. In most countries, people delegate a certain degree of their power to the State for collective decisions, the provision of public goods, and the maintenance of public orders. From the delegation of power, the State acquires authority. The plurality of power and the resistance are only implicitly touched upon by Hirschman.

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<sup>4</sup> There is no one generally agreed-upon definition of power in the literature. See Lukes (1986) for a collection of papers on the study of power. I select this definition because it is most useful for my discussion of the Hong Kong case.

A framework that contains only one kind of power--voice--would not be sufficient to examine the experience of land-value capture in Hong Kong. Voice will only identify the resistance from the lessees in the form of public protests to challenge the government's rules of allocating the land-value increments. To account for the power exercised by the government, I need a broader framework. Because power is a structure or a relation, it cannot be treated as a strategy; instead, how and when to exercise a person's power is a strategy. In this study, I call the government's strategy to exert its legal or political power to force lessees to accept its rules for dividing land value as coercion. For actions taken by lessees, I use voice to characterize the exercise of their power.

Indeed, the interplay of the coercion-voice relations between the State and the lessees had important implications on the outcome of capturing the surplus land value. In the case of lease renewal, although the State had the legitimacy and the legal backing to coerce lessees to accept its rules, voice forced the government to revise its policy and make major concessions. A framework that includes the element of coercion and voice will help to identify the question of how the public resistance (or voice) to the coercion of the State shaped the outcome of land-value capture.

In sum, I choose exit, voice, persuasion, and coercion in my framework as four key strategies that the parties used to revise rules of allocating land value. My framework does not represent a total departure from the original framework of Hirschman. It only expands the coverage of strategies to include government coercion and the use of persuasion to influence the parties' decisions on rule revision. The identification of these four strategies is necessary, but not sufficient, to explain the process of institutional change. I need to examine how different parties chose among these four strategies to lower the transaction costs of land-value capture in Hong Kong.

### **Choice of Strategy at Different Decision Levels**

The choice of strategy is constrained by the existing institutional setting. This institutional setting is a set of rules generated by the interactions among the political,

legal, economic, and social institutions in society. In Hong Kong case, there were formal and informal rules that guided the contracting parties's decision of selecting a different strategy to allocate the increased land value. For instance, through a series of court battles between the government and a lessee over the issues of land rent for lease renewal, judges established the precedent that the government had the legal right to set the land rent based on the full market value of the leased land. This precedent narrowed the possibility for other lessees to challenge the government policy through the legal system and, in turn, directed them to use persuasion and voice to resist the government policy. Thus, the choice set of the four strategies was restricted by the "macro" rules stipulated according to a specific institutional context. To identify these constraints, I incorporate Ostrom's (1990) classification of the three-level division rules in society, including the operational, collective-decision, and constitutional rules.

Operational rules are to guide decisions of individuals for the day-to-day transactions. These "working" rules are those actually applied, monitored, and enforced when individuals make decisions about actions they will take (Commons, 1934). Conditions that are specified in the land contract and are agreed upon between the government and a lessee are some operational rules. When the government demands additional payments from a leaseholder for lease renewal or modification, it must act according to these rules. These rules are normally enforced by the legislation and courts in Hong Kong.

Operational rules are changed by action taken at the collective-decision level. Most conditions in the land leases are standardized and made at the collective level with the inputs from officials in the various governmental departments, representatives from the real estate sector, and other relevant parties. Lessees must follow the same rules and procedures to estimate the necessary payment for renewing or modifying their land contracts. Any change of these rules would require decision making at the collective level, such as a court ruling or legislation, and the general approval of the contracting parties. Disagreement among the parties over the change will create difficulties in enforcement.

The way in which collective rules are established and enforced is guided by the constitutional order. The constitutional order is a set of rules for making rules.<sup>5</sup> In the constitution of Hong Kong, there are rules that specify in some general terms the structure of the government, its authority (and the limitations) for deciding on public policy, and the power to enforce its decisions. Owing to the unique colonial history of Hong Kong, there were rules issued by the British government dating back to the 1850s that explicitly stated who would have the ownership of land, how land rights should be assigned, and what procedures private individuals should follow to conduct land transactions. Without these constitutional rules, there will be no guideline for the involved parties to make collective decisions. Unable to settle individuals' differences collectively, costs of land contracting at the operational level will be very high.

Rules at the constitutional level are most difficult to alter. In most countries, it is designed this way so as to increase the stability of mutual expectations among individuals interacting according to a set of rules. In Hong Kong, people can reinterpret the meanings of the constitution, but a formal amendment would require a lengthy procedure. In the case of land ownership, it would be extremely difficult to change the system from the leasehold to a freehold system, because, in principle, the Crown owns all land. Because constitutional rules are relatively more "stable," I will treat these rules in Hong Kong as given in my analysis. I, therefore, focus on how the contracting parties use different strategies to revise the operational rules at the collective-choice level. I explain the individual's choice of a strategy in relation to the constraints imposed by the collective rules. In the next section, I summarize the procedures of how I apply this framework to the Hong Kong case.

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<sup>5</sup> Rawls (1972), Brennan and Buchanan (1985), and many other scholars have studied how individuals (or interest groups) who may possess incompatible and irreconcilable doctrines, including religion, philosophy, and morality, can agree upon a set of constitutional rules to endure a stable and just social order. Although this topic is important for our understanding of the emergence and modification of a constitutional order, it is beyond the scope of this study.

### **Procedures of Applying the Framework**

As a summary, I unify the idea of transaction costs that I discussed in Chapter 2 with the analytical framework developed here. In examining the Hong Kong case, I use each land-value-capture mechanism as a unit of analysis. I first identify the four types of transaction costs of land-value capture. I then apply the framework to study how the government and the lessees tried to modify the rules in order to minimize these transaction costs. The framework helps me to focus on four strategies, namely exit, voice, persuasion, and coercion. If the current operational rules could not resolve the problems of transacting, the parties would try to use different strategies to change them at the collective-decision level. Because the choice among the four strategies was limited by the rules established at the collective level, I examine how institutional settings determined the parties' choice of strategy. My last step is to analyze how the interplay of the parties' strategies shaped the outcome of land-value capture.

## CHAPTER 4

### LAND LEASING IN HONG KONG

Policy makers and real estate developers have been involved in land leasing in many countries for a long time. At present, most researchers have focused their analyses on land and property leasing mainly in the "private" sector (Bierman, 1988; Copeland and Weston, 1982; McConnell and Schallheim, 1983; Brealey and Myers, 1984). The empirical and conceptual issues of land contracting between the state and private developers, however, have remained understudied. In fact, many countries, such as Singapore, Australia (Bourassa, Neutze, and Strong, 1994; Neutze, 1988, pp. 1-34), India, Sweden (Doebele, 1983, pp. 84-88) and even the United States (Sagalyn, 1993a, 1993b), have adopted land leasing to manage part of their public land. Yet, among all these countries that employ the land-contracting system, only a few of them have extended the system to manage all land in a city. Hong Kong is an exceptional case. The purpose of this chapter is to describe the Hong Kong leasehold system in order to establish the context and provide background information for my discussion on the issues of land value capturing in this city-state.

Owing to the specific historical, political, and economic contexts of Hong Kong, its land-tenure arrangements are unique. To pinpoint their uniqueness, I first describe briefly the historical development of the Hong Kong leasehold system, because many current features of land contracting were developed from the original structure. Second, I describe in detail the three major policy objectives that the Hong Kong government wants to achieve through land contracting: (1) managing land development and urban growth, (2) stimulating industrial and housing development, and (3) capturing the future increases in land value. I illustrate how the Hong Kong government (hereafter referred to as the government) tries to achieve these different policy goals using four different types of land contracts, including the Conditions of Sale, the Conditions of Grant, the Conditions of Regrant, and the Conditions of Exchange. (I will define each of them later.) Due to the limited scope of my study, I discuss the first two policy objectives briefly and concentrate on the third. Readers

who are interested in the first two issues can refer to Yeh (1994) and Bristow (1984) for some general discussion.

### **The Hong Kong Leasehold System**

Hong Kong is located on the south coast of the People's Republic of China (PRC). The total land area of Hong Kong is about 1,070 km<sup>2</sup>. During the Ching Dynasty, the British ceded Hong Kong Island and Kowloon peninsula and then leased New Kowloon and the New Territories from the Chinese government. The lease for New Kowloon and the New Territories will expire on 1997, and the British government has agreed to return the sovereignty of all four districts to the PRC at that time.<sup>1</sup>

With a population of approximately six million people in 1994, Hong Kong is one of the most densely populated cities in the world.<sup>2</sup> To the Western World, Hong Kong is well known for its miraculous economic growth. Along with Singapore, Taiwan, and Korea, all four countries (or city-states) are referred to as the "four little dragons" in Asia. In the 1980s, these four Asian countries achieved economic growth faster than most developing countries and even some developed countries. (See Table 2-1 in Chapter 2.) Some economists have argued that the economic success of Hong Kong is mainly because of the British's "laissez-faire" approach to managing the economy. Indeed, the government has maintained a minimum level of involvement in regulating business practices and labor relations. There is no trade restriction on goods or capital. Taxes are set at low levels to stimulate private investments. Owing to these general principles in managing the economic affairs of Hong Kong, analysts

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<sup>1</sup> The four districts are the Hong Kong Island, Kowloon Peninsula, New Kowloon, and the New Territories. See Chapter 1 for a brief discussion on the differences among these districts.

<sup>2</sup> A population of six million people was the official figure in 1994. Other unofficial estimates were about 7 to 8 million.

have been using Hong Kong as an example for a "free-market" strategy to economic development.

Hidden under the label as being the most capitalist city-state in the world, there is a less recognized fact about Hong Kong. The fact is that the state owns all land, and land is the most valuable and scarce resource in this colony. When the British government first occupied Hong Kong in 1841, it immediately proclaimed that all land belonged to the "Crown." Only with the authorization of the Royal Majesty of Great Britain through the "Letters Patent" could the Governor of Hong Kong distribute land to private parties by granting them Crown leases (Wesley-Smith, 1983; Bristow, 1984). Many features of the current leasehold system of Hong Kong came from the initial land-leasing structure. A brief discussion of the origin of the Hong Kong leasehold system will, thus, help the reader to understand the present land-contracting system.

#### **The Origin of a Land-Leasing Structure: 1841-1898**

In 1841, most parts of Hong kong were steep and uninhabited. Despite this uninviting appearance and the vast amount of undeveloped land available, the British government recognized immediately the importance of controlling land and the possibility of raising public funds through the allocation of land resources. It, therefore, proclaimed that the government should not allow any private ownership of land. In May 1841, Captain Elliot, the first British official who was in charge of the colony affairs, issued a public notice to set some guidelines upon which the government would allot land to private individuals. According to the notice, the government would: (1) lease land to the public based only on "actual needs," (2) grant development rights of land through public auction, (3) set a minimum price (called the "upset" price) for the land lot put up for auctioning, (4) grant leases to the highest bidder in the auction, and (5) prohibit any private land transaction without notifying the government (Hong Kong Annual Yearbook, 1963, p. 4). Subsequently, these principles had become part of a constitution that governed land leasing in Hong Kong. Based upon the constitution, the then Governor of Hong Kong established a committee to survey and mark boundaries of land and a land court to settle disputes

on land claims. Along with the delineation of land rights, the government also legislated the Land Registration Ordinance of 1844, which required all land transactions to be registered in the Land Office.

Under the land-leasing system, the government assigned property rights to land based on contractual arrangements. These contracts specified the amount and type of development rights that the government granted to private developers. They also stated the period that developers could enjoy the granted rights. The government possessed the right to own, and private developers bought from the government only some specific development rights that lasted only through the duration of the leases. Within that period, developers could transfer the development rights to other parties. They also had the right to benefit from all land development and transactions, subject to payments of land premia, rent, rate, and property tax to the government. In Hong Kong, land premia are money collected by the government from the initial land auctions, modifications of lease conditions, and contract renewals. The government also levies a rate on owner-occupied properties based on their estimated "rateable" value. The rateable value is the annual rent that property owners might reasonably expect if they let their property in the open market. The government sets the level of rate annually, depending on its financial needs. In 1990, the government set the rate at 5.5 percent of the rateable value of properties. It was 11.5 percent in the 1970s. The property tax is levied on income earned from commercial real estate. Currently, the standard rate of the property tax is set at 17 percent.<sup>3</sup>

The implementation of the land-leasing policy was not without problems. There were periods of confusion and conflict. Between 1841 and 1898, for example, the duration of the leases was subjected to intensive debate. Initially, in 1843, the Governor of Hong Kong set the lease term to 75 years without the option to renew.

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<sup>3</sup> Although a property tax of 17 percent may seem high comparing to the tax rates in most cities in the United States, the tax is not levied on the capital value of the property. Assume that an annual rental income of a property is about 10 percent of its capital value, a tax rate of 17 percent on the rental value will be equivalent to 1.7 percent of the capital value of the building.

Leaseholders, however, argued that the tenure was too short and made formal complaints to the government.<sup>4</sup> In response to complaints from lessees, the Governor proposed to extend the lease term from 75 to 999 years in 1848 (Hong Kong Annual Report, 1963, p. 11; Bristow, 1984, p. 27). The Secretary of State of Britain accepted the Governor's proposal reluctantly due to the potential intensification of the discontent among lessees and possible reduction in the collection of land rent. The Governor then granted an extension of 924 years to all 75-year leases with no additional charge. For the next 50 years, all land leases in Hong Kong, except a few Kowloon peninsula lots, were granted for a period of 999 years. Indeed, some of the most expensive land sites in the Central Business District of Hong Kong today were granted at that time and had a lease term of 999 years.<sup>5</sup>

In 1898, the British government began to recognize that the long duration of land leases would deprive it of the ability to share the financial benefits of the increasing land value with lessees. Immediately, the British government ordered the Governor of Hong Kong not to grant any additional 999-year leases. Instead, it would offer land developers 75-year leases with an option to renew their leases for another 75 years without any additional payment or fine. The government would only require lessees to pay a new level of rent determined by the Director of Public Works at the date of expiry. The government called these leases "renewable leases." I was not able to find any documents that described the reaction of the public at that time. I, however, speculate that the option to renew was a way employed by the government

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<sup>4</sup> Unfortunately, as far as I know, there is no detailed account of how the leaseholders conveyed their grievances and eventually persuaded the government to change its policy.

<sup>5</sup> These 999-year land contracts are similar to perpetual leases. With agreements between the British and the Chinese government established in the 1984 Sino-British Joint Declaration, the future Hong Kong Government will recognize these leases as legal contracts between the State and leaseholders. Yet, there is no explicit statement of how these contracts will be renewed when they expire in 2847.

to compromise with leaseholders for the drastic change in its land-leasing policy.

Following these events, 75 years became the standard duration of leases since 1898.

The history shows that the terms of the leases, which could be 75, 99, or 999 years, were partly determined by politics. Politics, as I use it here, was the constant attempt of the involved parties to influence those who set and applied the rules. To reconcile the different perceptions on what constitutes as secured tenure, the involved parties used politics to shape the term of the leases. I will return to the issue of politics for lease renewal in Chapter 7. The point here is that political exchanges between the state and other related parties play an important role in shaping the land-leasing policy in Hong Kong.

### **The Current Structure of the Hong Kong Leasehold System**

Since 1898, the system of land leasing in Hong Kong has evolved into a complex structure. Policy objectives that the government wants to achieve through land leasing are also manifold. The government has been employing land leasing to: (1) manage urban growth, (2) promote industrial development and subsidize affordable housing, and (3) raise public funds. Depending upon its goals, the government will structure the conditions of the leases differently. There are four types of land contracts in Hong Kong. I summarize functions of each type of land contract in Table 4-1. For instance, the Conditions of Regrant is the contract for lease renewal. In principle, the establishment of this contract creates the opportunity for the government to renegotiate additional lease payments with lessees and thus capture the increased land value when leases expire.

In the following sections, I review the three major policy objectives of land leasing in Hong Kong and identify how the government uses different types of land contracts to achieve these goals. The discussion will be brief, because an in-depth analysis of, say, the management of urban growth using the Conditions of Sale would be a topic by itself. The purpose here is to illustrate that land-value capture is only one of the three major functions of the Hong Kong leasehold system.

**Table 4-1. CHARACTERISTICS OF DIFFERENT LAND CONTRACTS**

| Land Contract          | Functions  | Method of Assignment   | Duration of Contract   | Conditions of Contract  | Policy Goals   |
|------------------------|--|--|--|---|--|
| Conditions of Sale     | Facilitating initial leasing of land rights.   | Public auction.  | Mostly 75 years. Some have option to renew for another 75 years. | <ol style="list-style-type: none"> <li>1. The minimum leasing price.</li> <li>2. The payment method of premium (either in one lump sum or in installment.)</li> <li>3. The amount of annual rent.</li> <li>4. The location and plot size of the leased land.</li> <li>5. The specific restrictions on land uses, height, and design of building.</li> <li>6. Provision of streets and parking facilities.</li> <li>7. Timing of the completion of the construction project according to the conditions specified in the land contract.</li> </ol> | <ol style="list-style-type: none"> <li>1. Capturing the increased land value.</li> <li>2. Managing urban growth.</li> </ol>  |
| Conditions of Grant    | Allocating land to special industries and organizations that provide affordable housing and public utilities.  | Private treaties.  | 15 to 21 years and normally renewable.                           | Same as the Conditions of sale.   | <ol style="list-style-type: none"> <li>1. Promoting the development of key industries and public utilities.</li> <li>2. Providing affordable housing.</li> </ol>   |
| Conditions of Exchange | Facilitating lease modifications which involve: <ol style="list-style-type: none"> <li>1. readjusting the boundaries of the land lot</li> <li>2. correcting the land area</li> <li>3. redeveloping two separate land lots under different ownerships.</li> </ol> | By application.  | Remaining of the original terms of the Conditions of Sale.       | Same as the Conditions of Sale plus: <ol style="list-style-type: none"> <li>1. the amount of premium for lease modification</li> <li>2. the new level of rent</li> <li>3. new conditions imposed on the redeveloped property.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Capturing the increased land value.</li> <li>2. Managing urban growth.</li> </ol>  |
| Conditions of Regrant  | Extending the nonrenewable leases.   | By application.  | Normally 75 years.   | Same as the Conditions of Sale plus: <ol style="list-style-type: none"> <li>1. premium for lease extension</li> <li>2. the new level of rent</li> <li>3. updated land-use regulations on the property.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Capturing the increased land value.</li> <li>2. Reserving the rights of the state to take back land when it is needed for public purposes.</li> <li>3. Incorporating the updated land-use regulations into old land leases.</li> </ol> |
| Crown Lease            | A legal title that substitute for the conditions of sale.  | After lessees fulfill the Conditions of Sale, i.e., pay the full amount of premium and complete the construction of the buildings. | Remaining of the original terms of the Conditions of Sale.       | Same as the Conditions of Sale.   | Restricting lessees to mortgage and sublease the leased land before the completion of the project so as to avoid land speculation.   |

Source: Compiled by the author.

### **Urban Land Management Through the Conditions of Sale**

Two major objectives of urban land management under the Hong Kong leasehold system are to allocate land resources to its best uses and to guide urban development. I first discuss how the government allocates land to private individuals by land contracting. I then review mechanisms of controlling land uses through contractual agreements established in the land leases.

**Land Allocation.** When the government plans to lease a parcel of land to private developers through public auctions, it will first prepare a Conditions of Sale.<sup>6</sup> In the Conditions of Sale, the government specifies the location and the plot size of the leased land and the other attached restrictions on the use, height, and design of the building. It also states the minimum price and the method of paying the premium for leasing the land. Currently, in preparing the Conditions of Sale, officials in the Land Department will circulate a draft contract to different departments, such as the Planning Department, the Transportation Department, and the Department of Public Works. Officials in these departments will then review the conditions contained in the contract and recommend appropriate changes. In this way, the government can ensure that terms established in the contract will be sufficient to guide the uses of the leased land according to the general comprehensive plan of the city. Besides, based on the recommendations from other government departments, officials of the Land Department can negotiate with potential developers for the private provision of, say, streets and parking facilities.

After the preparation of the Conditions of Sale, the government sends the contract to all interested land developers. Based on the conditions stated in the contract, private developers estimate the leasing price and bid for the development rights of land in the public auction. In the auction, competition among bidders

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<sup>6</sup> Information about the drafting of the Conditions of Sale and the installment-payment methods for premia is from personal interviews with government officials in Hong Kong. If information is from other sources, I will provide the appropriate references accordingly.

determines the premium paid to the government for leasing the land. Normally, the government requires the bidder who gets the lease to pay 10 percent of the premium as a downpayment at the closing of the auction. The lessee then has to pay the remaining balance in one lump sum within 30 days.

Before 1981, the government gave lessees the option to pay their premia in annual installments. The deferred-payment method was started in 1969. At that time, the installment-payment system was only for nonindustrial land. The major purpose of this scheme was to encourage investment in the property market that was very sluggish during that period. Initially, the government only applied the scheme to valuable land sites in the Central Business District where the amount of land premia was HK\$10 million or more (Hong Kong Annual Yearbook, 1970). Subsequently, the government extended the installment-payment methods to all leasing of residential, commercial, and industrial land. It offered leaseholders the option to pay their premia in ten equal installments with an interest fee of 5 percent per annum.

All the installment-payment methods were generally successful in stimulating land and real estate investments. With the low interest charged to leaseholders, the government subsidized land development by providing low-cost financing. The payment methods were deemed necessary in 1969, because the banking crisis made the financing of land development difficult and excessively expensive to obtain. After the Hong Kong economy recovered from the banking crisis, the government continued to offer the option to leaseholders. These payment methods then became major features of the government land-leasing policy until 1981. In that year, the government abolished the deferred-payment method because of the increasing number of defaults in paying the installments by lessees.

**Controlling Land Uses.** Besides helping the involved parties to assess the leasing price of the land or the government to demand the provision of infrastructure from lessees, the Conditions of Sale is also the major instrument to enforce land-use regulations (Bristow, 1984, p. 161; Roberts, 1975, pp. 13-14). The Planning Ordinance in Hong Kong is not as comprehensive as similar legislation found in other

countries. It only provides the power to the Town Planning Board to prepare and approve an "Outline Zoning Plan." The enforcement of the Outline Zoning Plan has to rely on the Building (Planning) Regulations of the Buildings Ordinance and the lease conditions. As I have mentioned earlier, the government stipulates the restrictions on uses, height, plot ratio, and design of the buildings built on the leased land in the conditions of the contract. In most situations, these contract conditions give the Hong Kong Government the ability to control development in detail on a case-by-case basis. Whenever leaseholders want to modify the conditions of their leases, they have to apply to the Lands Department and the Buildings Department for permission. Officials of these departments will approve those applications only if modifications will not violate the Outline Zoning Plan or the Building Regulations. If an application is approved, the government will reassess an additional premium and impose a new set of covenants on the modified contract (Roberts, 1975).

The enforcement of the Outline Zoning Plan through lease conditions is not without problems. Due to the distinct processes and the different periods that the British government took over various parts of Hong Kong, the lease structures vary among Hong Kong Island, Kowloon Peninsula, New Kowloon, and the New Territories. While some leases have explicit restrictions on the uses of the leased land, others have unrestricted development rights (Roberts, 1975; Yeh, 1994). Bristow (1984, p. 161) and Yeh (1994, pp. 13-18) argue that some old leases that have no restrictions on land uses are now causing environmental problems and incompatible land uses with the Outline Zoning Plan. The government cannot incorporate the new restrictions on land uses into the land contracts, because it can only modify lease conditions when the leases expire. The normal lease term in Hong Kong is 75 years. Hence, the conditions of the leases established, say, fifty years ago may not agree with the development control stated in the current Outline Zoning Plan. If the government decides to impose the current land-use restrictions on lessees' properties, it will breach the lease conditions. Its action may lead to court battles and possibly large payments of compensation by the government to leaseholders. In other words, although the contract conditions may have great flexibility in terms of controlling land development

on an individual basis, they are extremely inflexible in adjusting to changes in the overall zoning plan through time.

For developers, one advantage of the leasehold system is that land contracts provide the certainty for the development potential of the leased land. With detailed and explicit land-use restrictions specified in the land leases, developers can calculate the appropriate premium for leasing the development rights. In principle, this will reduce the risks due to changes in planning regulations (Yeh, 1994, p. 10).<sup>7</sup> Yet, given the continuous revisions of the Outline Zoning Plan, a condition allowed in the land contracts may suddenly be restricted by the plan. This will cause confusion to developers as to which planning standards they should follow as they make their investments. The confusion may, in turn, undermine the certainty that the land contracts can provide to developers. Currently, the government and members of the planning professions are reviewing this issue. They cannot settle on whether or not the government should pay compensation to leaseholders when changes of the zoning plan infringe the lessees' land rights. This issue of growth management under the leasehold system is an important topic that analysts should investigate thoroughly in the future.

### **Developing Public Housing and Special Industries**

Not all contracting of development rights of land is granted in the form of Conditions of Sale. For land that the government provides to special industries and nonprofit organizations, it normally grants the development rights to these institutions using the Conditions of Grant. (See Table 4-1.) Unlike the Conditions of Sale, the government uses "private treaties" rather than public auctions to determine premia in these land contracts. To establish a private treaty, a potential lessee first submits an application to the government for leasing the land rights. In the application, the lessee

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<sup>7</sup> I interviewed several major Hong Kong land and real estate developers in the summer of 1992 and 1993. They concurred that land contracts provide a high degree of certainty for land development.

proposes the type of development and a financial plan for the development project. If the government approves the application, it then negotiates with the lessee on the amount of premium and the specific conditions of the land contract. Similar to the Conditions of Sale, terms in the Conditions of Grant cover the restrictions imposed on the development period, land use, and building design of the proposed building project.

Depending upon how the government calculates the premium, there are three types of Conditions of Grant: (1) nominal-premium grant, (2) reduced-premium grant, and (3) full-market-value grant.<sup>8</sup> Lessees who obtain the nominal-premium grants only have to pay a small amount of money to the government for leasing the land. Before 1986, lessees who held the nominal-premium grants did not have to pay any premium at all. After the government revised this rule, leaseholders of the nominal-premium grants now pay a nominal amount of HK\$1,000 to the government. Only nonprofit organizations, such as schools, religious associations, child-care centers, and hospitals, are qualified to apply. The lease term for the nominal-premium grants ranges from 15 to 21 years, and these leases are normally renewable.

**Provision of Public Housing.** Through the nominal-premium grants, the government subsidizes public housing by granting land to the Hong Kong Housing Authority at a very low premium. The Housing Authority is a quasi-public agency that is responsible for the provision of public housing to low-income groups in Hong Kong. It is financially independent and has the autonomy of formulating strategies to carry out the public-housing policy of the government. In Hong Kong, most public housing is in the form of rental apartments. Rent for public housing is, on average, set at 25 percent of the market value of the comparable rental apartments provided by the private sector (Hong Kong Housing Authority, 1993, p. 56). The Housing

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<sup>8</sup> I gathered information about all these types of private treaty grants from personal interviews with government officials of the Planning, Environment, and Land Branches of Hong Kong in the summer of 1993.

Authority also operates the Home Ownership Schemes that provide housing units for the middle-income class to purchase at below-market value. It is estimated that the housing programs of the Housing Authority cover three million people (about half of the population) in Hong Kong (Hong Kong Housing Authority, 1993). With the rapid increases in land prices, the Housing Authority can only build affordable housing for the low- and middle-income groups by not having to pay the land premium at the full market value.

The government also awards the reduced-premium grants to the Hong Kong Housing Society. Like the Hong Kong Housing Authority, the Housing Society is a nonprofit organization that operates several rental estates and the "Flat-for-Sale Scheme" for the middle- and low-income groups. The government gives land sites to the Housing Society through a reduced-premium grant for rental estates at premia that are one-third of the full market value of the leased land. For sites that the Housing Society uses for the Flat-for-Sale scheme, the government charges only half of the full market value of the land.

Castells, Goh, and Kwok (1990) have argued that the leasehold system in Hong Kong allows the state to subsidize public housing. When all the land is state-owned, the government does not have to purchase land from private landowners and pay them compensation. This, in turn, reduces the costs of providing public housing for the poor. This is especially important for Hong Kong because land prices have been increasing rapidly. If all land were privately owned, the government would have to be financially very strong to be able to purchase land for the provision of public housing.

The ability to provide the public with a large amount of subsidized housing has a significant implication on the economic development of this city-state. During the early period of the industrialization of Hong Kong, the state provided affordable housing and thus prevented the costs of living from increasing rapidly. Because the costs of living remained stable, wages and salaries could be maintained at a low level. By holding the costs of labor down, the government, in turn, enhanced the price competitiveness of Hong Kong products in the world markets. With increases in the

demand for the Hong Kong products in the international markets, industries and businesses could expand rapidly (Castells, Goth, and Kwok, 1990).

**Promoting Special Industries.** The government also employs the full-market-value grant to promote the development of special industries and transportation facilities. Industries, including gas, telecommunication, oil refineries, and electricity, are usually land-intensive and cannot be operated in multi-storey industrial buildings. Similarly, transportation facilities, such as the railway and container terminal, require large quantities of land. If these companies have to compete with other land developers for leasing land in public auctions, they may have to pay high prices to obtain the required land. The overhead costs of establishing and operating these businesses in Hong Kong will then be extremely high. To attract the development of these industries, the government leases the development rights of land to these companies through the full-market-value grants. Although lessees of this type of land contract have to pay their premia at the "full market value," they can pay them in installments. Normally, these premia are paid over 20 years with an interest charge of 5 to 10 percent per annum. Besides, these premia are decided solely by negotiations between the government and the potential grantees. There is no competitor to bid up the prices for leasing the land. It is, therefore, unclear whether the negotiated payments are comparable with the premia if they had been determined at public auctions. The government uses the Conditions of Grant to allot land in order to foster industrial growth and develop public utilities, not to capture the land-value increments. The issue of whether lessees of the Conditions of Grant are paying the full market value of the leased land is secondary under this situation.

### **Capturing Land-Value Increments**

Another function of land leasing is to capture the future increases in land value. As I mentioned in Chapter 1, there are four mechanisms of capturing the land value under the Hong Kong leasehold system. The government employs the Conditions of Sale and Conditions of Grant to facilitate the collection of the annual rent and premia

from the initial auctions and private treaties. It may use the Conditions of Exchange to recoup the increases in land value during lease modifications. For lease renewals, it can utilize the Conditions of Regrant to recoup land-value increments. Because I have discussed how premia for the Conditions of Sale and Conditions of Grant are determined initially earlier, I only talk about land-value capturing during lease modifications and renewals and the types of contracts involved here.

**Lease Modification.** When lessees want to improve or redevelop their properties, they may need to remove the restrictions imposed on the development of the leased land. These land-use restrictions are specified in the conditions of the land contracts. For altering these conditions, lessees have to apply to the Lands Department for lease modifications.<sup>9</sup> If the government approves the applications, it will demand an additional premium for modifying the lease conditions. The premium is based upon the potential increases in land value after the development restrictions are lifted. The rationale for demanding more money is that when leaseholders revise the development restrictions, they are requesting additional development rights from the government; therefore, they should have to pay for the newly acquired land rights.

The government uses two methods to facilitate lease modifications: (1) issuing a Conditions of Exchange or (2) attaching a document of modification to the existing lease. If the modifications involve some drastic changes to the existing conditions of the land contracts, the government will require lessees to surrender the old leases and reissue a new one called the Conditions of Exchange to them. These circumstances include: (1) a readjustment of the boundaries of the land lot, (2) a correction of the registered land area with a discrepancy between the actual land size and the

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<sup>9</sup> If the proposed construction meets the minimum requirements of the conditions specified in the land contract, the lessee does not need to modify the lease conditions. Instead, the lessee has to submit a building plan to the Buildings Department. If the design of the plan does not violate any regulations stated in the Building Ordinances, the Buildings Department will issue a permit to the lessee that will allow her/him to proceed with the redevelopment.

government record of more than 0.1 percent, or (3) a joint development of two separate land lots under different ownerships. For a modification that falls beyond these three categories, the government normally issues a "Deed of Variation" or a "modification Letter" and attaches it to the existing contract. The government does not issue any new contract to the lessee. The Deed of Variation and the Modification Letter state the nature of the modifications, the required premium, and additional conditions for carrying out the lease revisions. All other conditions of the existing land lease remain unchanged and effective.

The general principle of assessing the premia for lease modifications is that lessees must pay the government any enhancement in the land value deriving from the modifications. There are five ways that the government and the involved parties can assess the potential increases in land value. These methods include the "comparative," "investment," "residual," "profits," and "contractor's" methods (Cruden, 1986, pp. 395-422). All are standardized valuation principles established by the Hong Kong Institute of Surveyors and the Royal Institute of Chartered Surveyors. In Hong Kong, the most commonly used techniques are the comparative and residual methods. I, therefore, only elaborate on these two techniques.

The comparative method is to estimate the land value based on a recent leasing price of a land parcel that possesses similar characteristics, such as the plot size, the floor-area ratio, the location, and uses, with the appraised land (Roberts, 1974). After assessing the property values before and after the modification, the difference between the two estimates would be the premium for revising the lease conditions. For the residual method, surveyors first estimate the current market value of the additional structure built on the land parcel. They then subtract the construction costs and profits for the building contractors and developers from the estimated property value to derive the current market value of the land. Profits for the general contractors are about 20 percent of the total construction costs. Profits for developers are also about 20 percent of the residual land value after the deduction of the construction costs and profits for contractors. The result after the deduction of all these costs and profit margins is the

assessed land-value increments. Again, this will be the premium that lessees need to pay for changing their lease conditions to carry out the improvement project.

With either one of the two methods, the government and developers estimate the premium independently. The premium calculated by the two parties can be different for two reasons. First, the government and developers may use different methods to appraise the increases in land value. Second, they may assess the property value using different assumptions to project the future demand for the involved property in the real estate market and thus come up with different land value estimates. To reconcile these differences, the two parties negotiate with each other. Depending upon the degree of complexity and the extent of disagreement on the estimated premium, the time required for the negotiation can range from three months to three years (Wan, 1985).

When the involved parties cannot assess the increases in land value by applying the normal valuation principles, the government demands an "empirical" premium. An empirical premium is a fixed charge for lease modifications, typically involved in the increase in the number of flats and reduction of car parking requirements. For example, for increasing the number of flats beyond the number permitted in the lease conditions, the government may charge an empirical premium of HK\$250,000 in 1993 (equivalent to US\$32,000). The empirical premium for reducing the parking requirement is also HK\$250,000. The government reviews the empirical premium regularly during its Land Administration Meeting. The Principal Land Agent, who is the third highest ranking official of the Lands Department, chairs the meeting. She or he will invite other members of the Lands Department, such as the District Land Agencies and Senior Estate Surveyors, to the meeting to set the appropriate amount of empirical premium.

Besides an additional premium, lessees have to pay an administrative fee for modifying their land leases. The administrative fee consists of two components: (1) a fixed amount of HK\$3,000 (equivalent to US\$389) and (2) an extra \$3,000 per one million HK dollars of the land value after modification. The total administrative fee for each modification cannot exceed HK\$43,000 (about US\$5,570).

There are great variations in the empirical premium and the administrative fee that the government collects from leaseholders for modifying their land leases. I will not go into detail about these different payments charged for various lease modifications here. The interesting thing is that the government has a set of very detailed guidelines for calculating the empirical premium and the administration fee for each specific type of modification. For instance, instructions are available for the calculation of charges on lease modifications ranging from the removal of all restrictions imposed on industrial land sites to the installation of an automatic teller machine at a gas station. Another relevant example is the calculation of the modification premium for the extension of time to fulfill the building covenants. As I noted earlier, the government specifies the time that lessees need to complete the land development. The purpose of this lease condition is to prevent developers from holding on to the land for future appreciation of land prices. In this way, the government may eliminate land speculation. If a developer wants to extend the time to complete the development project, s/he must apply to the government for a lease modification. The government has established a set of standardized rules to charge such a premium. The government will charge a certain percentage of the current market value of the land involved as follows:

| <u>Period of extension</u> | <u>Percentage of Land value</u> |
|----------------------------|---------------------------------|
| 1st year                   | 2                               |
| 2nd year                   | 4                               |
| 3rd year                   | 8                               |
| 4th year                   | 14                              |
| 5th year                   | 22                              |
| 6th year                   | 32                              |

With these institutionalized procedures and standardized calculations of charges for different types of lease modification, the government can ensure that it will not treat similar lease revisions differently.

**Regrant of Nonrenewable Leases.** Another opportunity for the government to capture the increases in land value is during lease renewals. To explain how the Hong

Kong government may achieve that, I start with the distinctions between the nonrenewable and the renewable leases. The major distinction is that whereas the nonrenewable leases contain no provision of renewal when they expire, the renewable leases provide such an option.

When the nonrenewable leases expire, the lessees must apply to the government for extending their land rights. This procedure is called the regrant of nonrenewable leases. Up to 20 years before their leases expire, the lessees can apply for an early regrant. The option for an early regrant is to avoid the negligence of maintaining the buildings when leases are approaching their expiration date. No one will spend money on preserving their properties if there are uncertainties on extending the land leases.

If the government does not require the land for public purposes, it will issue a new contract called the Conditions of Regrant to the lessee. In the Conditions of Regrant, the government imposes new conditions, including the updated building covenants, requirements for public infrastructure, and the additional premium for regranting the land rights to the lessee. The premium for lease regrant represents the full market value of the land either at the date of expiry or the date of application for the extension.

If the government needs the leased land for public purposes, it can reject the application. The government may pay compensation to leaseholders for the infrastructure that has already been built. Cruden (1986, pp. 12-15) states that the government can exercise its contractual right to take back land. It can also use the statutory power defined in the Crown Lands Resumption Ordinance to review all retaking matters, especially the amount of compensation. Yet, the legal process involved in taking back the leased land is very lengthy. Besides, the government runs the risk of provoking confrontation from leaseholders (or the existing tenants). As far as I know, there is no detailed study on whether the contractual right of "re-entry" specified in the land contracts actually allows the government to take back land with no (or little) compensation for the land. It is also unclear whether the state faces less resistance from leaseholders because it has the contractual right to take back land.

These are, again, important issues related to the leasehold system that deserve careful analysis in the future.

**Extension of Renewable Leases.** Procedures involved in the renewal of the renewable leases are different. As I discussed earlier, the government started to grant the 75-year renewable leases to leaseholders in 1898 to replace the 999-year leases. In the renewable leases, the government granted the right to lessees to renew their leases for another 75 years with no additional premium or fee. When these leases were up for renewal, lessees would only have to pay a new level of rent. Before 1973, the Director of Public Works was responsible for determining the "new" rent for lease renewal. Due to a massive public protest in 1973, the legislative Council in Hong Kong decided to set the new land rent equal to 3 percent of the rental (or rateable) value of the property built on the leased land. In Chapter 7, I will discuss in detail this controversy and its implications on the government's ability to capture the surplus land value in renewing these leases.

Currently, there is literally no distinction between the renewable and the nonrenewable leases. In 1984, Britain and the PRC have agreed to renew all land leases that expired on or before June 27, 1997 for another 50 years. To renew their leases, lessees will not pay any additional premium. They are only required to pay a new level of rent set at 3 percent of the rental value of their properties. The only difference between the current and the future policy is that after 1997, the government can adjust the level of rent whenever it reassesses the rental value of the properties.

Despite the growing interest in the experience of land-value capturing under the land-contracting system of Hong Kong, there are only a few analysts who have examined the issue empirically. Recently, Yeh (1994) and analysts of the World Bank (1993) have studied the importance of land revenues generated through land leasing in Hong Kong. Analysts in both studies, however, only show the importance of land revenues in the total government budget. They do not tell what percentage of the land-value increments the government can capture. More importantly, if land leasing can (or cannot) help the government to retain the future increased land value, these

analysts have not examined which mechanisms are most (or least) effective for the government to achieve the objective. These are the issues that I will examine in the remainder of this study.

### Summary

The Hong Kong government has employed land leasing to achieve three policy objectives. First, it uses the conditions specified in the land contracts to manage urban growth. Second, through granting land rights to special industries and nonprofit organizations with premia at below market value, the government stimulates economic development and provides vital social services and infrastructure for the population. Third, the state tries to capture the surplus land value by collecting premia from developers during the initial auctions, lease modifications, and contract renewals.

These three policy objectives are not unrelated with each other. Accomplishing one of these goals may, sometimes, be at the expense of the others. For example, the amount of premia that the government can obtain from a land contract is influenced by the restrictions imposed on the lease. If the conditions of a contract restrict the height of the development to six stories, land developers will obviously pay less for this contract than for the contract that would allow them to build a 20-story building. The aim of raising revenues could, therefore, be incompatible with the objective of directing the urban growth towards a low-density development. Besides, when the government subsidizes special industries by granting land rights with premia at below market value, it will lose the opportunity to capture the land-value increments for other public services and investments. It may not be possible to achieve all three policy objectives simultaneously. Hence, policy makers must weigh the tradeoffs between these different goals in employing the various contractual instruments available in land leasing.

Due to the interrelationships among these policy objectives, we must examine all of them to assess how land contracting can help the state to accomplish its goals. Yet, studying all these complex issues together is beyond the scope of my current research. To make the study manageable, I focus on the issues of capturing the land-

value increments under the Hong Kong leasehold system. In Chapter 5, I provide some empirical evidence on the experience of land-value capture in Hong Kong. After analyzing this experience, I examine each of the four mechanisms in Chapters 6 and 7 and investigate which mechanisms the government relied upon to capture the surplus land value between 1970 and 1991.

## **CHAPTER 5**

### **LAND-VALUE CAPTURE UNDER THE HONG KONG LEASEHOLD SYSTEM: EMPIRICAL EVIDENCE**

In recent years, the financing of local government expenditures has changed tremendously. Many of these changes involve the fiscal relationships between the "central" and the "local" governments. In the United States, for example, with the budget cuts initiated at both the federal and the state levels, some city governments have to rely more on revenues raised within their own jurisdictions. This situation can also be found in other developing countries, such as Indonesia and Kenya, where the central governments have decentralized fiscal responsibilities to the provincial and city levels. Similarly, with the former Soviet Union disintegrated into different sovereign states, the newly established regimes suddenly have to face the responsibility of financing the development of their own public infrastructure and social services. In all these cases, as public funds from the central government are reduced or totally cut, local officials are searching for alternative sources of revenue. Among many proposals, local governments in some countries are trying to recoup the surplus land value generated partly by public-infrastructure investment. Especially in some former socialist countries where most land is still under the control of the state, officials are thinking of using land leasing to raise public funds.

In Chapter 4, I discussed the three different functions of the Hong Kong leasehold system. One function is to capture the surplus land value. The purpose here is to present some empirical evidence of land-value capture in Hong Kong. I first discuss my two main criteria for determining the level of success of land-value capture. Second, I state how I estimate the percentages of land-value capture using data gathered from my contract-based case studies. Third, I present the results of my estimation. Fourth, I show the percentages of public infrastructure expenditures financed by land revenues in Hong Kong from 1970 to 1991. Finally, based on the two criteria, I evaluate the experience of land-value capture in Hong Kong.

### **Two Criteria for Evaluating Land-Value Capture**

As I stated in Chapter 1, analysts believe that a leasehold system would allow the state to capture the future land-value increments because it retains the right to own land. This conventional wisdom, however, has not been subjected to enough careful scrutiny. In their studies, Yeh (1994, p. 9) and the World Bank's analysts (1993) examine the importance of "land revenues" collected from land leasing as a percentage of the total government budget. Yeh argues that total land revenues accounted for 8.6 percent of the total government budget between 1974 and 1990. The percentage for individual years range from 0.3 to 35.6 percent. Based on these figures, he then asserts that land revenues were an important source of revenue for the Hong Kong government in selected years. Yet, this source of public funds was very unstable (Yeh, 1994, p. 20).

World Bank's analysts (1993) take the same set of numbers for Hong Kong and argue that the experience of this city-state does not show that land revenues generated under a leasehold system are significant. They then caution policy makers in other countries, specifically the People's Republic of China (PRC), against setting the goal of raising substantial public funds through land contracting.

I will, however, argue that the percentage of land revenues in the total government budget is not an adequate indicator to reflect the ability of the government to capture the future increases in land value. For example, if the value for all land in Hong Kong has increased, say, by HK\$1 billion in a particular year, capturing 1 percent of this increase is HK\$10 million. Depending on the size of the government annual budget, the land revenues collected may appear to be an important source of government revenue. Yet, in actuality, the government only captures 1 percent of a huge increase in land value.

Conversely, the Hong Kong government may capture a large portion of the increased land value. Although the percentage of land-value capture is large, the amount of money collected may be insignificant because of a moderate increase in land prices. In this case, the percentage of land revenues in the total government budget will be small. Analysts, therefore, cannot settle the question of whether land

leasing can help the government to capture future increases in land value by looking just at the percentage of land revenues in the total government budget. Undeniably, data are usually not available to calculate the percentage of land value captured by different instruments under either the leasehold or the freehold system. Thus, analysts, normally, use the percentage of land revenues in total government receipts or expenditures as a proxy to measure the ability of the state to recoup the surplus land value.

Owing to the inadequacy of the existing method of evaluating whether a leasehold system can help the government financially, I propose two criteria: (1) the average percentage of land value captured by a government using land leasing, and (2) the proportion of the public "infrastructure expenditures" financed by the captured value. (I will define infrastructure expenditures later.) Although the first criteria is obvious, the purpose of the second criteria and its connection with the first needs explanation.

The reason for wanting to know whether or not the captured land value finances a major part of public works is related to issues of "sustainability" of public infrastructure investment. I define a sustainable public investment as a project that generates sufficient revenue to cover its costs and, possibly, allows a "reasonable" return for governments. Because the consumption of most public infrastructure is non-exclusive and joint, the burden of investment costs may not fall directly on persons who enjoy the "benefits" of these goods. For example, a government builds a public road that enhances the accessibility of a community. The officials may not establish a system to charge the actual users of the road because it may incur high collection costs. With higher accessibility to the community with no additional charge, the demand for houses increases. Property values will rise. Under such a condition, the financial benefit generated by public infrastructure expenditures is reflected partly in higher property values. Although the government may use property taxes or other instruments (discussed in Chapter 1 and Appendix A.) to recoup part of the windfall gain, it normally does not collect as much as it could to cover the investment costs of

the road. This, in turn, undermines the financial capability of the state to fund further improvements of the road or other public works.

Under a sustainable system of financing public infrastructure investment, the state should be able to recapture most of the land-value increments that its projects generate. The captured land value should then pay for a large part of the infrastructure expenditures. In this way, a public agency would be able to retain profits from its investments to cover their costs and, possibly, reinvest the surplus for additional infrastructure to support the ongoing urban growth and economic development.

To illustrate my points further, I categorize the various possible combinations of the percentage of land-value capture (PLVC) and the percentage of infrastructure expenditures (PIE) financed by the captured value into four cases. I portray these cases in Figure 5-1, which is a very rough summary of all possible outcomes. Pigeonholing of some borderline cases is unavoidable. I use these cases only to show the basic contrast among various mixes of PLVC and PIE.

In Quadrant I, both the PLVC and the PIE are small. There are two possible situations that may occur. First, the low PLVC suggests that a government can capture only a small percentage of the surplus land value. This leads to a small PIE because the captured value is so insignificant that it cannot help the government to fund public works. Second, a local government may depend heavily on "external" funds to finance expenditures on public works. These external sources of money could be from loans granted by the World Bank and other foreign aid agencies or funds allocated from the central government. Land revenues, thus, account for only a small percentage of infrastructure investment. The PIE is, thus, small. When public infrastructure is financed by foreign debts, revenues generated from the investment must be used to repay them. Instead of recovering the construction costs through property taxes, the government may collect a fee directly from users. Because financial returns of a project will not be captured as land revenues through property taxes, the PLVC will be small.

**Figure 5-1.  
PERCENTAGE OF LAND-VALUE CAPTURE AND  
PERCENTAGE OF INFRASTRUCTURE EXPENDITURES  
FINANCED BY LAND REVENUES**

|      |       | PIE  |   |
|------|-------|--|---|
|      |       | Small  | Large   |
| PLVC | Small | <p><b>I</b><br/>The State is not able to capture the increased land value and thus is incapable of financing infrastructure investment through internally generated funds.</p>   | <p><b>II</b><br/>Increases in land value are large, and thus a small percentage of land-value capture can finance a large percentage of infrastructure investment.</p>                  |
|      | Large | <p><b>III</b><br/>The increases in land value are small. Although the State can capture a large percentage of land-value increments, the amount of land value captured can finance only a small percentage of infrastructure investment.</p> | <p><b>IV</b><br/>The State is capable of capturing a large percentage of land-value increments, and the captured value can finance a large percentage of infrastructure investment.</p> |

Source: Author

Notes:

PIE = Percentage of Infrastructure Investment Financed by Land Revenues

PLVC = Percentage of Land-Value Capture

In both situations, a small PLVC and PIE signify that a government is unable to fund infrastructure expenditures through internally generated land revenues. The investment on public infrastructure depends upon a stable inflow of foreign aid or money from the central government. Any reduction of these funds will affect the sustainability of public infrastructure investment that is beyond the control of the local government. I have described some changes of the fiscal relationships between the central and the local governments in the beginning, which illustrate clearly that external funds are not at all stable.

In Quadrant II, the PLVC is small, but the PIE is large. Under this situation, the land values of a country may increase very fast. Owing to some large increases in land value, a small PLVC can amount to a substantial amount of money. This fund can then finance most of the infrastructure expenditures. In this case, public investments will be considered to be sustainable because the captured value can cover a large part of the investment costs. Yet, a small PLVC may imply that a government does not capture fully the appreciation in property values. If the government takes a more aggressive approach to retrieve the land value, it may obtain more land revenues to recover further the costs of public investments.

In Quadrant III, while the PLVC is large, the PIE is small. There are also two possible reasons for this outcome. First, it is possible that the development of the land and real estate markets is still at an initial stage. At this stage, land value is usually low. Although the government can capture a large percentage of the land-value increments as revenues, they are insignificant because of the low land value. Second, the capturing of land value through, say, property taxes may be so aggressive that it discourages private investments in land. Because of the lack of private capital to develop the land market, the land value remains low. Again, although the government may recoup a large portion of the surplus land value, the captured value is so low that it cannot pay for the expenditures on public works.

To make public infrastructure investment sustainable, a government should design policies that will stimulate growth by attracting both domestic and international investments in land and real estate. Simultaneously, the state should also reserve its

rights to share the future capital appreciation in land with developers. Unless new policies can induce increases in land value without foregoing the state's ability to capture it, land revenues will not play an important role in financing public works.

Public infrastructure investment in the last case (Quadrant IV) is the most sustainable. Both the PLVC and the PIE are large. This implies that the government can recoup most of the surplus land value and use the captured value to finance a large percentage of expenditures on public works. Under such a system, a government can balance the revenue and costs of its projects. With sufficient funds collected as land revenues, the government can undertake investments and improvements in public infrastructure continuously. There will be no massive borrowing. The sources of funds will be stable and within the control of the local governments. Besides, the government will not have to allocate revenues from income and sale taxes to build public infrastructure, but to use these funds for other economic and social purposes.

By analyzing the PLVC and PIE, analysts will understand better whether land leasing can help the government financially. In the rest of Chapter 5, I evaluate the experience of land-value capture in Hong Kong based on these two indicators. In the next section, I estimate the PLVC with data gathered from my contract-based case studies.

### **Contract-Based Case Studies**

My major objective in conducting the contract-based case studies was to examine the ability of the Hong Kong government to capture the surplus land value. To do that, I chose 92 land parcels leased in the 1970s and estimated their increases in values from 1970 to 1991. I then compared the estimated land value to revenues collected by the government from these land parcels and calculated the percentages of land-value capture. In this section, I stated my methods of: (1) selecting the sample for my study and (2) estimating the percentages of the land-value capture.

### **Selecting the Sample for the Contract-Based Case Studies**

There are approximately 27,268 parcels of land in Hong Kong; and for each parcel, the government issues a land contract to specify the type and the amount of development rights granted to private developers. Among all these land sites, I concentrated on those that the government leased to private developers through the Conditions of Sale between 1970 and 1979.<sup>1</sup> From these land contracts, I gathered data about the total amount of premia collected by the government when it leases land initially to developers in public auctions and subsequently modifies and renews land leases. As I discussed in Chapter 4, when leaseholders modify their land contracts, the government will attach a "letter of modification" to the back of their leases. If lessees renew their leases, they surrender the old leases to the government. For the nonrenewable leases, the government then issues a Conditions of Regrant to them. It is therefore most logical to begin with the Conditions of Sale to examine any subsequent changes or renewals of land contracts.

There are three reasons for selecting land sites leased between 1970 and 1979. First, the demand for land before 1970 was mainly from the industrial sector. The priority of the Hong Kong land policy then was to promote industrial development, and the government disposed of land for industrial purposes partly through "private treaty" grants. Land premia charged for the private treaty grants were normally lower than the current market value of the leased land. Because the government might deliberately lower the premia to stimulate industrial development, this action had a dampening effect on prices for industrial land leased through the Conditions of Sale in public auctions. Industrial land sites leased before 1970 are, therefore, not good examples to learn whether land leasing would enable the government to capture the land-value increments. From the beginning of the 1970s, the demand for land began to shift from industrial to commercial and residential purposes (Annual Yearbook, 1969). Normally, the government charged premia for both commercial and residential

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<sup>1</sup> See Chapter 4 for the definitions for the Conditions of Sale, Conditions of Regrant, nonrenewable leases, and private treaty grants.

land sites at the full market value. Hence, a sample selected after 1969 is not only a good mix of land contracts for different land uses, but also best represents the ability of the government to capture the surplus land value.

Second, beginning in the 1970s, after years of experience in developing the leasehold system, the Hong Kong government could use land contracts in a very sophisticated way. The government was more conscious about using land leasing to share with developers the financial benefits of the rapidly increasing land value. On the contrary, some land contracts issued in the 1940s and the 1950s had no well-specified conditions attached. They are sometimes called "open" or "unrestricted" leases. Without any explicit restrictions imposed on these contracts, the ability of the government to capture the increases in land value is undermined. For instance, a developer may not have to pay an additional premium for, say, increasing the height of the building up to the limit allowed by the Outline Zoning Plan because the government did not specify a height restriction in the land contract. To get a good sample for a "mature" land-leasing system, I decided to concentrate on the land contracts established after 1969.

Third, in the 1980s, the return of the sovereignty of Hong Kong to the PRC in 1997 significantly affected the land revenues collected by the Hong Kong government. I have explained the reason for excluding these political influences in my study in Chapter 1 and will not repeat them here.

After I decided which land leases should be included in my study, I studied these contracts for 22 years. Specifically, I estimated the increases in land value occurring between 1970 and 1991 for selected land sites. There are two reasons for choosing a 22-year study period. First, to observe whether or not the government can recoup the surplus land value when lessees modify their land contracts, I must examine these leases for a period long enough to allow for the inclusion of lease modifications. Because the building cycles in Hong Kong last about six to ten years (Jao, 1974, p. 251), I must study these land contracts for more than ten years to investigate if the government can recoup land-value increments through lease

modifications. For contracts issued in the late 1970s, I have to study them from the dates that they were issued to, at least, 1991.

Second, for land contracts established in the 1970s, the government allowed lessees to pay land premia in 20 annual installments. In other words, the collection of land revenues from these contracts stretched from the 1970s to the 1990s. To analyze how much infrastructure expenditure was financed by land value captured by these leases, I must also examine the percentages of land revenues in annual infrastructure expenditures in the 1980s. If I concentrate only on the period between 1970 and 1979, I will underestimate the percentages of infrastructure expenditures financed by revenues generated from land leased in the 1970s.

Data for revenues collected in the 1980s from official documents will include the premia and rent collected from contracts granted after the 1970s. This may then overstate the percentages of infrastructure expenditures supported by land revenues generated in the 1970s. Yet, the overestimation may not be a significant problem for two reasons. First, according to the Sino-British Joint Declaration, the existing government cannot lease more than 50 hectares of land a year. (See Chapter 1 for a brief description of the Declaration.) Second, the future government retains half of the land revenues. Under this situation, infrastructure expenditures in the 1980s might still rely mostly upon revenues collected from land leases established in the 1970s.

After I decided the period for my study, I examined a register compiled by the Hong Kong Land Registry that lists all land leased through the Conditions of Sale between 1970 and 1979. Within that period, the government leased 423 parcels of land. I selected 120 land sites randomly (every fifth on the list) and eliminated 28 of them because of incomplete information or unavailability of the actual land contracts. The total number of cases in my sample is, therefore, 92. In Table 5-1, I illustrate the distribution of the cases selected by district. I also show the representation of my sample for all land sites in Hong Kong and those leased between 1970 and 1979. The total number of the cases selected accounts for 21.7 percent of all land leased between

**Table 5-1. REPRESENTATION OF SAMPLES FOR THE CONTRACT-BASED CASE STUDIES**

|                           | Estimated<br>Number<br>of<br>Land Lots* | Percentage<br>of Total<br>Land Lots | Contracts<br>issued<br>1970-1979** | Percentage<br>of Total<br>Land Contracts<br>Issued | Contracts Selected for Case Study |   |  |
|---------------------------|---|-------------------------------------|------------------------------------|--|-----------------------------------|---|--|
|                           |   |                                     |                                    |  | Number of<br>Selected<br>Cases    | As a<br>Percentage<br>of Total<br>Land Lots | As a<br>Percentage<br>of Total Land<br>Contracts Issued<br>1970-1979 |
| Hong Kong Inland Lots (1) | 9,227                                   | 33.8                                | 133                                | 31.4   | 46                                | 0.5   | 34.6   |
| Kowloon Inland Lots       | 9,874                                   | 36.2                                | 117                                | 27.7   | 25                                | 0.3   | 21.4   |
| Kowloon Marine Lots       | 103                                     | 0.4                                 | 0                                  | 0.0  | -                                 | -   | -  |
| New Kowloon Inland Lots   | 6,031                                   | 22.1                                | 118                                | 27.9   | 21                                | 0.3   | 17.8   |
| Kung Tong Inland Lots     | 715                                     | 2.6                                 | 13                                 | 3.1  | -                                 | -   | -  |
| Yau Tong Inland Lots      | 38                                      | 0.1                                 | 27                                 | 6.4  | -                                 | -   | -  |
| Yau Tong Marine Lots      | 74                                      | 0.3                                 | 0                                  | 0.0  | -                                 | -   | -  |
| Aberdeen Marine Lots      | 25                                      | 0.1                                 | 2                                  | 0.5  | -                                 | -   | -  |
| Chai Wan Marine Lots      | 2                                       | 0.0                                 | 0                                  | 0.0  | -                                 | -   | -  |
| Shaukiwan Inland Lots     | 798                                     | 2.9                                 | 0                                  | 0.0  | -                                 | -   | -  |
| Shaukiwan Marine Lots     | 32                                      | 0.1                                 | 0                                  | 0.0  | -                                 | -   | -  |
| Shek Oi Inland Lots       | 95                                      | 0.3                                 | 2                                  | 0.5  | -                                 | -   | -  |
| Stanley Inland Lots       | 82                                      | 0.3                                 | 11                                 | 2.6  | -                                 | -   | -  |
| Tai Hang Inland Lots      | 172                                     | 0.6                                 | 0                                  | 0.0  | -                                 | -   | -  |
| <b>Total</b>              | <b>27,268</b>                           | <b>100.0 (2)</b>                    | <b>423</b>                         | <b>100.0 (2)</b>                                   | <b>92</b>                         | <b>0.3</b>                                  | <b>21.7</b>  |

Sources: \*The estimated number of land lots is obtained from Names of Streets and Buildings in Hong Kong Island and Names of Streets and Buildings in Kowloon and New Kowloon published by the Hong Kong Government.

\*\*Information related to contracts issued between 1970 and 1979 is obtained from the Hong Kong Land Registry.

Note: (1) Hong Kong Inland Lots include Aberdeen Inland Lots and Chai Wai Inland Lots.

(2) The column total may not add to 100 because of rounding.

1970 and 1979.<sup>2</sup> For these cases, I cover 34.6 percent of all land lots leased during the study period for "Hong Kong Inland." For "Kowloon Inland" and "New Kowloon Inland," the percentages are 21.4 and 17.8 percent, respectively.

### **Estimating the Land-Value Capture**

To estimate the percentage of land-value capture by the government, I first gathered information about the amount of premia collected from the land contract for each selected land site. Data concerning the amount of premia paid by developers are public information, and the Hong Kong Land Registry keeps all this information on microfilm. By paying a nominal fee, I obtained the microfilms for most of my selected cases. From these microfilms, I summed the total premia and rent charged for each contract and computed the 1991 value of the amount. Based on the assumption that the government would have to borrow the money to finance infrastructure expenditures if it did not collect these revenues, I used the best lending rates that the Hong Kong and Shanghai Bank offered to its major corporate clients between 1970 and 1991 as the discount rates to calculate the 1991 value of the premia and rent collected.<sup>3</sup> Next, I estimated the increases in land value occurring between 1970 and 1991 for selected land parcels. Owing to the way that I calculated the percentage of land-value capture, I only needed to estimate the 1991 land value. The equation for calculating the percentage of the land-value capture is:

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<sup>2</sup> Although the number of cases in my sample is small (only 0.3 percent) in relation to the total number of land contracts in Hong Kong, the sample is still a good representation for the land leases issued at the time when the Hong Kong leasehold system was most well-developed and absent from unique political disturbances.

<sup>3</sup> Information about the best lending rates is from the Hong Kong Statistical Digest, 1992.

$$PLVC = \frac{(\text{Prm}_{\text{ini}} + \text{Prm}_{\text{Mod}} + R)}{LV_{91}}$$

where

|                    |                                       |
|--------------------|---------------------------------------|
| PLVC               | = Percentage of Land-value Capture    |
| Prm <sub>ini</sub> | = Premium from Initial Public Auction |
| Prm <sub>Mod</sub> | = Premium from Lease Modification     |
| R                  | = Annual Rent                         |
| LV <sub>91</sub>   | = Estimated 1991 land value           |

I provide the derivation of the equation in Appendix C.

I stated in Chapter 4 that in Hong Kong, there are two common ways to assess the market value of land: (1) the comparative and (2) the residual methods (Roberts, 1974). For assessing the 1991 land value, I used the residual method. I began by estimating the 1991 market value of properties built on the selected land parcels. I then subtracted the construction costs and profits for the building contractors and developers from the estimated property value to derive the 1991 market value of land. I obtained the estimated 1991 property values for different types of buildings located in different districts and for various land uses from the Hong Kong Property Review (Rating and Valuation Department of Hong Kong, 1993). I also gathered information concerning the 1991 construction costs for various types of buildings from the 1991 Survey of Building, Construction and Real Estate Sectors (Census and Statistics Department of Hong Kong, 1993).

In fact, the residual method is far more complex than I have stated here. To make the estimations manageable and possible with limited data, I had to rely on several assumptions.

1. Property values for selected cases are equal to the average prices of the same type of buildings located in a district.
2. The construction costs for residential buildings are the same within a district. It is also true for the construction costs for commercial and industrial buildings.

3. In estimating the property values, saleable area is equal to the lot size times the plot ratio. In other words, there is no common area, such as open spaces or parking lots. This assumption may lead to an overestimation of the property value because of the increase in the saleable area in my calculation. This, in turn, will overstate the land prices.
4. When a land site is specified for residential use, there is no retail shop operating on the ground floor of the building built. This assumption may lead to an underestimation of the land price because a retail shop normally has a higher property value. This underestimation will, to some extent, eliminate problems of assumption No. 3 that overstates the land value.

Based on these assumptions, I produced two sets of estimates for each selected land parcel: (1) the land premia and rent collected and (2) the assessed 1991 land value, all in 1991 dollars. By dividing the total land premia by the estimated land-value increments, I derived the percentages of the increases in land value captured by the government for selected cases in my sample.

### **Percentage of Land-Value Capture**

In Table 5-2, I illustrate the estimated percentages of land-value capture for the 92 cases. These percentages range from 5 to 111 percent. On average, the government captured 39 percent of the land-value increments occurring between 1970 and 1991. It shows that, in terms of percentage, the government did retain a significant portion of the increased land value occurring between 1970 and 1991 for land sites leased in the 1970s. There are two caveats to this interpretation. First, does an average of 39 percent of land-value capture within a 22-year period represent a "significant" retainment of the surplus land value? Ideally, to determine the relative significance of this percentage, I must conduct a comparative study. A comparative study, however, is beyond the scope of my current study. Unfortunately, as far as I know, there is no existing study that estimates the percentage of land-value capture in other cities. Without any comparison, I cannot decide whether the percentage of captured under the leasehold system is higher or lower than other land-tenure

TABLE 5-2. LAND CONTRACTS SELECTED FOR THE CONTRACT-BASED CASE STUDIES

| File Name | Lot Number | Location                                  | District      | Land use     | Classification of sites | Plot Ratio | Area (sq. M.) | Date of Issue | Lease Revenues |              |             | Total Lease Revenue (1991 HK\$) | Estimated Land Value At 1991 (1991 HK\$)* | Estimated Percentage of Land Value Capture |       |
|-----------|------------|---|---------------|--------------|-------------------------|------------|---------------|---------------|----------------|--------------|-------------|---------------------------------|---|--|-------|
|           |            |   |               |              |                         |            |               |               | Premia         |              | Rent        |                                 |   |  |       |
|           |            |   |               |              |                         |            |               |               | Initial        | Modification |             |                                 |   |  | Total |
| C/S11233  | IL8469     | Queensway, Central                        | Central       | Bus terminal | C                       | 18.000     | 3,983.0       | 08/04/78      | 585,000,000    |              | 585,000,000 | 1,000                           | 2,262,731,281                             | 4,064,555,350                              | 56%   |
| C/S11253  | KIL10602   | Tsim Sha Tsui East                        | Tsim Sha Tsui | Hotel        | C                       | 12.000     | 2,150.0       | 09/29/78      | 175,000,000    |              | 175,000,000 | 1,000                           | 678,902,084                               | 1,564,381,968                              | 61%   |
| C/S10225  | IL8294     | Harcourt Rd., Central                     | Central       | Hotel        | C                       | 10.000     | 3,362.5       | 05/16/72      | 105,000,000    |              | 105,000,000 | 8,306                           | 658,167,527                               | 1,818,777,791                              | 36%   |
| C/S11242  | IL8392     | Jun. of Harbor Rd. & Fleming Rd., S.W.    | Sheung Wan    | Hotel        | C                       | 9.630      | 6,062.0       | 09/13/78      | 415,000,000    | 8,999        | 415,008,999 | 1,000                           | 1,605,226,118                             | 3,157,661,488                              | 51%   |
| C/S10583  | NKIL5566   | Lai Chi Kok Rd, Cheung Sha Wan            | C.S.W.        | Ind./Godown  | C                       | 10.400     | 1,389.4       | 02/08/74      | 4,300,000      | 1,032,136    | 5,332,136   | 1,000                           | 23,478,664                                | 145,229,591                                | 16%   |
| C/S10801  | NKIL5623   | Cheung Sha Wan & Lai Chi Kok Rd           | C.S.W.        | Ind./Godown  | C                       | 10.400     | 1,441.4       | 08/08/75      | 4,450,000      | 952          | 4,450,952   | 1,000                           | 20,384,569                                | 150,669,629                                | 14%   |
| C/S10673  | NKIL5589   | Cheung Sha Wan & Lai Chi Kok Rd           | C.S.W.        | Ind./Godown  | C                       | 10.000     | 2,500.9       | 07/12/74      | 5,050,000      |              | 5,050,000   | 1,000                           | 24,721,337                                | 251,358,907                                | 10%   |
| C/S10775  | NKIL5490   | Cheung Sha Wan & Lai Chi Kok Rd           | C.S.W.        | Ind./Godown  | A                       | 10.000     | 991.6         | 04/18/75      | 2,100,000      |              | 2,100,000   | 1,000                           | 10,303,809                                | 99,665,535                                 | 10%   |
| C/S10532  | NKIL5539   | Cheung Sha Wan Rd, C.S.W.                 | C.S.W.        | Ind./Godown  | A                       | 10.000     | 1,301.1       | 11/09/73      | 4,800,000      | 64,401       | 4,864,401   | 1,000                           | 26,320,433                                | 130,770,149                                | 20%   |
| C/S10547  | NKIL5540   | Cheung Sha Wan Rd, C.S.W.                 | C.S.W.        | Ind./Godown  | A                       | 10.000     | 1,301.1       | 11/30/73      | 4,500,000      |              | 4,500,000   | 1,000                           | 24,369,654                                | 130,770,149                                | 19%   |
| C/S10691  | NKIL5493   | Lai Chi Kok Rd., Cheung Sha Wan           | C.S.W.        | Ind./Godown  | A                       | 10.000     | 1,398.7       | 08/09/74      | 2,500,000      | 61,469       | 2,561,469   | 1,000                           | 12,620,461                                | 140,577,910                                | 9%    |
| C/S10151  | IL7954     | King's Rd., North Point                   | North point   | Ind./Godown  |                         |            | 697.0         | 03/20/72      | 1,620,000      | 24,316       | 1,644,316   | 688                             | 10,344,690                                | 64,284,851                                 | 16%   |
| C/S9624   | KIL9674    | Chi Kiang St., Kwun Tong                  | Kwun Tong     | Ind./Godown  |                         | 10.000     | 621           | 02/16/70      | 860,000        |              | 860,000     | 246                             | 6,271,312                                 | 62,461,427                                 | 10%   |
| C/S9607   | KIL9673    | Chi Kiang St., Kwun Tong                  | Kwun Tong     | Ind./Godown  |                         | 10.000     | 480           | 01/19/70      | 980,000        |              | 980,000     | 190                             | 7,140,070                                 | 48,198,141                                 | 15%   |
| C/S9601   | KIL9678    | Yuk Yat St., Kwun Tong                    | Kwun Tong     | Ind./Godown  |                         | 10.000     | 1,060         | 12/22/69      | 2,120,000      |              | 2,120,000   | 420                             | 15,446,492                                | 106,577,671                                | 14%   |
| C/S9653   | KIL9679    | Yuk Yat St., Kwun Tong                    | Kwun Tong     | Ind./Godown  |                         | 10.000     | 1,029         | 03/16/70      | 1,770,000      |              | 1,770,000   | 406                             | 12,900,229                                | 103,401,825                                | 12%   |
| C/S10963  | IL8415     | Upper Lascar Row & Hollywood Rd.          | Sheung Wan    | Offices      | C                       | 9.500      | 289.0         | 09/24/76      | 4,950,000      |              | 4,950,000   | 1,000                           | 21,320,881                                | 65,455,649                                 | 33%   |
| C/S10878  | IL8403     | Upper Lascar Row & Hollywood Rd.          | Sheung Wan    | Offices      | C                       | 12.000     | 371.7         | 01/09/76      | 6,800,000      |              | 6,800,000   | 1,000                           | 31,124,384                                | 98,890,959                                 | 38%   |
| C/S11244  | IL8453     | Upper Lascar Row, Sheung Wan              | Sheung Wan    | Offices      | C                       | 9.538      | 634.0         | 09/13/78      | 30,000,000     | 415,706      | 30,415,706  | 1,000                           | 117,782,099                               | 144,169,124                                | 82%   |
| C/S11211  | IL8454     | Upper Lascar Row & Lok Ku Rd              | Sheung Wan    | Offices      | C                       | 9.538      | 730.9         | 06/21/78      | 30,750,000     | 13,359       | 30,763,359  | 1,000                           | 126,026,465                               | 166,203,805                                | 76%   |
| C/S11066  | IL8389     | Gloucester Rd. & Harbor Rd., S. W.        | Sheung Wan    | Offices      | C                       | 11.050     | 4,943.0       | 05/11/77      | 140,000,000    | 3,931,318    | 143,931,318 | 1,000                           | 615,542,587                               | 1,302,202,637                              | 47%   |
| C/S11100  | IL8429     | Queen's Rd. ctrl & Low Lascar Row         | Sheung Wan    | Offices      | C                       | 11.330     | 211.0         | 07/25/77      | 5,000,000      | 80,753       | 5,080,753   | 1,000                           | 20,851,033                                | 56,995,169                                 | 37%   |
| C/S11340  | IL8497     | Queen's Rd., Sheung Wan                   | Sheung Wan    | Offices      | C                       | 11.267     | 1,176.0       | 07/13/79      | 79,000,000     |              | 79,000,000  | 1,000                           | 271,149,159                               | 315,885,531                                | 86%   |
| C/S11282  | IL8486     | Queen's Road, West, Sheung Wan            | Sheung Wan    | Offices      | C                       | 11.290     | 1,299.0       | 01/09/79      | 62,000,000     |              | 62,000,000  | 1,000                           | 239,832,086                               | 349,646,170                                | 69%   |
| C/S10974  | IL8390     | Gloucester Rd. & Harbor Rd., S. W.        | Sheung Wan    | Offices      | C                       | 15.000     | 4,340.4       | 11/30/76      | 120,000,000    | 405,890      | 120,405,890 | 1,000                           | 517,897,562                               | 1,552,196,486                              | 45%   |
| C/S11049  | IL8426     | Queen's Rd Ctrl & Low Lascar Row          | Sheung Wan    | Offices      | C                       | 11.328     | 1,779.4       | 04/29/77      | 53,000,000     |              | 53,000,000  | 1,000                           | 227,978,397                               | 480,565,411                                | 47%   |
| C/S11279  | IL8480     | Queen's Road, Central, Sheung Wan         | Sheung Wan    | Offices      | C                       | 12.000     | 861.0         | 12/11/78      | 49,000,000     |              | 49,000,000  | 1,000                           | 189,549,697                               | 246,325,901                                | 77%   |
| C/S11194  | IL8413     | Hollywood Rd., Sheung Wan                 | Sheung Wan    | Offices      | C                       | 10.333     | 623.0         | 04/25/78      | 25,000,000     | 848,916      | 25,848,916  | 1,000                           | 105,946,051                               | 153,475,889                                | 71%   |
| C/S11265  | IL8412     | Jun. of Hollywood & Possession St.        | Sheung Wan    | Offices      | B                       | 10.000     | 127.0         | 10/30/78      | 4,800,000      |              | 4,800,000   | 1,000                           | 18,589,573                                | 35,788,896                                 | 52%   |
| C/S10005  | IL8266     | Electric Rd. & Wing Hing St., North Point | North point   | Offices      | B                       | 5.000      | 259.9         | 09/27/71      | 2,100,000      |              | 2,100,000   | 256                             | 13,168,449                                | 43,862,120                                 | 30%   |
| C/S11062  | IL8425     | Lower Lascar Row, Sheung Wan              | Sheung Wan    | Offices      | B                       | 5.000      | 97.0          | 05/11/77      | 2,200,000      | 8,883        | 2,208,883   | 1,000                           | 9,531,200                                 | 13,667,413                                 | 70%   |
| C/S10635  | KIL10275   | 938 Canton Rd, T.S.T.                     | Tsim Sha Tsui | Offices      | A                       | 5.000      | 67.5          | 05/10/74      | 100,000        |              | 100,000     | 1,000                           | 586,109                                   | 6,611,893                                  | 9%    |
| C/S10884  | IL8402     | Upper Lascar Row & Hollywood Rd.          | Sheung Wan    | Offices      | A                       | 10.000     | 436.8         | 02/13/76      | 9,500,000      |              | 9,500,000   | 1,000                           | 43,468,353                                | 128,927,057                                | 34%   |
| C/S10727  | KIL10274   | 810 Canton Rd, T.S.T.                     | Tsim Sha Tsui | Offices      | A                       | 5.000      | 70.5          | 11/29/74      | 135,000        |              | 135,000     | 1,000                           | 700,270                                   | 6,912,434                                  | 10%   |
| C/S10185  | IL8300     | 117 Wai Chai Rd., Wai Chai                | Wai Chai      | Offices      | A                       | 10.000     | 106.7         | 04/14/72      | 570,000        |              | 570,000     | 80                              | 3,574,890                                 | 53,842,978                                 | 7%    |
| C/S10083  | KIL9909    | 130 Austin Rd, T.S.T.                     | Tsim Sha Tsui | Offices      | A                       | 3.500      | 1,394.1       | 11/26/71      | 840,000        |              | 840,000     | 346                             | 5,281,198                                 | 95,626,554                                 | 6%    |
| C/S10628  | KIL10216   | 10 Observation Court, T.S.T.              | Tsim Sha Tsui | Offices      | A                       | 5.000      | 106.4         | 04/26/74      | 420,000        |              | 420,000     | 1,000                           | 2,315,822                                 | 10,427,848                                 | 22%   |
| C/S10888  | IL8401     | Hollywood Rd., Sheung Wan                 | Sheung Wan    | Offices      | A                       | 10.000     | 204.5         | 03/05/76      | 3,400,000      |              | 3,400,000   | 1,000                           | 15,580,126                                | 60,348,835                                 | 26%   |
| C/S11362  | IL8506     | 2A New St., Sheung Wan                    | Sheung Wan    | Offices      | A                       | 5.000      | 95.5          | 11/26/79      | 2,700,000      | 389,185      | 3,089,185   | 1,000                           | 10,355,085                                | 14,093,922                                 | 73%   |
| C/S11373  | IL8536     | Bonham Rd., Sheung Wan                    | Sheung Wan    | Offices      | A                       | 5.900      | 42.7          | 12/12/79      | 1,750,000      |              | 1,750,000   | 1,000                           | 6,026,330                                 | 7,435,983                                  | 81%   |
| C/S11084  | IL8424     | Queen's Rd Ctrl & Low Lascar Row          | Sheung Wan    | Offices      | A                       | 9.860      | 590.2         | 06/07/77      | 16,000,000     | 2,290,671    | 18,290,671  | 1,000                           | 78,862,295                                | 171,764,972                                | 46%   |
| C/S10909  | IL8414     | Upper Lascar Row & Hollywood Rd.          | Sheung Wan    | Offices      | A                       | 10.000     | 380.1         | 04/23/76      | 6,100,000      | 142,380      | 6,242,380   | 1,000                           | 28,578,742                                | 112,193,971                                | 25%   |
|           | IL8267     | King's & Fortress Hill Rd, North Point    | North point   | Residential  | B                       | 6.000      | 2,364.3       | 09/27/71      | 30,300,000     |              | 30,300,000  | 1,168                           | 189,858,635                               | 471,707,427                                | 72%   |
| C/S11113  | KIL10547   | Ko Shan Rd., Kowloon City                 | Hung Hom      | Residential  | C                       | 10.630     | 490.0         | 08/26/77      | 10,200,000     | 367,137      | 10,567,137  | 1,000                           | 43,395,796                                | 102,362,536                                | 90%   |
| C/S10650  | IL8358     | Cloud View Rd, North Point                | North Point   | Residential  | C                       | 5.000      | 2,020.4       | 05/31/74      | 8,900,000      | 75,488       | 8,975,488   | 1,000                           | 48,535,978                                | 223,946,818                                | 22%   |
| C/S11185  | NKIL5735   | Pak Tin, Shek Kip Mei                     | Shek Kip Mei  | Residential  | C                       | 5.990      | 660.0         | 03/31/78      | 13,800,000     |              | 13,800,000  | 1,000                           | 56,553,343                                | 77,693,100                                 | 73%   |
| C/S11157  | NKIL5736   | Pak Tin, Shek Kip Mei                     | Shek Kip Mei  | Residential  | C                       | 6.000      | 1,330.0       | 12/19/77      | 27,900,000     | 12,113       | 27,912,113  | 1,000                           | 114,359,562                               | 156,824,742                                | 73%   |
| C/S9960   | NKIL5395   | Broadcast Dr., Kowloon Tong               | Kowloon Tong  | Residential  | B                       | 3.960      | 1,722         | 07/26/71      | 4,460,000      |              | 4,460,000   | 412                             | 30,057,645                                | 118,865,030                                | 25%   |
| C/S11300  | NKIL5769   | 15-21 La Salle Rd., Kowloon Tong*         | Kowloon Tong  | Residential  | B                       | 3.300      | 3,289.0       | 03/22/79      | 35,000,000     | 231,600      | 35,231,600  | 1,000                           | 136,247,920                               | 189,167,943                                | 94%   |
| C/S11140  | NKIL5734   | Po Kong Village Rd., Shek Kip Mei         | Shek Kip Mei  | Residential  | B                       | 4.279      | 92.9          | 10/14/77      | 1,000,000      | 4,038        | 1,004,038   | 1,000                           | 4,140,669                                 | 6,632,827                                  | 45%   |
| C/S10227  | KIL10146   | 26 Battery St., Yau Ma Tei                | Yau Ma Tei    | Residential  | B                       | 5.000      | 62.5          | 06/16/72      | 450,000        |              | 450,000     | 62                              | 2,822,216                                 | 5,218,113                                  | 54%   |
| C/S10694  | IL8364     | Cloud View Rd, North Point                | North Point   | Residential  | B                       | 5.000      | 3,531.6       | 07/26/74      | 11,100,000     | 1,361,360    | 12,461,360  | 1,000                           | 60,613,464                                | 391,443,380                                | 15%   |
| C/S10656  | NKIL5598   | Hiu Kwong St., Kwan Tong                  | Kwun Tong     | Residential  | B                       | 9.000      | 3,653.3       | 05/31/74      | 12,200,000     | 97,678       | 12,297,678  | 1,000                           | 66,422,570                                | 573,063,847                                | 12%   |
| C/S9793   | IL8239     | Cloud View Rd., North Point               | North point   | Residential  | B                       | 5.000      | 2,602.2       | 11/23/70      | 2,100,000      | 293,557      | 2,393,557   | 642                             | 15,193,609                                | 288,431,964                                | 5%    |

TABLE 5-2. LAND CONTRACTS SELECTED FOR THE CONTRACT-BASED CASE STUDIES (Continued)

| File Name | Lot Number | Location                              | District      | Land use    | Classification of sites | Plot Ratio | Area (sq. M.) | Date of Issue | Lease Revenues |              |             | Total Lease Revenue (1991 HK\$) | Estimated Land Value At 1991 (1991 HK\$)* | Estimated Percentage of Land Value Capture |      |
|-----------|------------|---------------------------------------|---------------|-------------|-------------------------|------------|---------------|---------------|----------------|--------------|-------------|---------------------------------|---|--|------|
|           |            |                                       |               |             |                         |            |               |               | Initial        | Modification | Total       |                                 |   |  |      |
| C/S9741   | NKIL5290   | Broadcast Dr., Kowloon Tong           | Kowloon Tong  | Residential | B                       | 3.300      | 1,580         | 08/24/70      | 2,410,000      |              | 2,410,000   | 390                             | 16,252,464                                | 90,869,956                                 | 18%  |
| C/S11048  | KIL10364   | 11 Sham Chun St., Yau Ma Tei*         | Yau Ma Tei    | Residential | B                       | 6.000      | 100.5         | 04/29/77      | 1,850,000      |              | 1,850,000   | 1,000                           | 7,988,138                                 | 10,061,391                                 | 111% |
| C/S10363  | KIL10126   | 167 & 169 Shanghai St., Yau Ma Tei    | Yau Ma Tei    | Residential | B                       | 5.000      | 142.5         | 11/24/72      | 1,460,000      |              | 1,460,000   | 140                             | 8,553,961                                 | 11,886,133                                 | 72%  |
| C/S10035  | NKIL5413   | Fessenden Rd & Broadcast Dr., Kowloon | Kowloon Tong  | Residential | B                       | 3.900      | 1,850.4       | 10/29/71      | 4,500,000      |              | 4,500,000   | 458                             | 28,212,967                                | 125,776,630                                | 22%  |
| C/S10950  | IL8416     | King's Road, North Point              | North Point   | Residential | A                       | 5.000      | 2,230.5       | 08/27/76      | 41,500,000     | 1,124,853    | 42,624,853  | 1,000                           | 183,193,255                               | 241,762,714                                | 76%  |
| C/S9867   | NKIL5347   | Hip Wo Rd., Kwun Tong                 | Kwun Tong     | Residential | A                       | 5.000      | 4,435         | 02/15/71      | 3,920,000      |              | 3,920,000   | 1,096                           | 26,464,649                                | 415,548,140                                | 6%   |
| C/S10477  | NKIL5515   | Kung Lok Rd, Kwan Tong                | Kwun Tong     | Residential | A                       | 5.000      | 2,098.5       | 06/29/73      | 6,500,000      |              | 6,500,000   | 518                             | 38,077,341                                | 196,627,766                                | 19%  |
| C/S10764  | IL8386     | 50 First St., Sheung Wan              | Sheung Wan    | Residential | A                       | 5.000      | 64.3          | 03/14/75      | 220,000        |              | 220,000     | 1,000                           | 1,115,690                                 | 6,970,825                                  | 16%  |
| C/S10390  | NKIL5436   | Marconi Rd., Kowloon Tong             | Kowloon Tong  | Residential | A                       | 3.250      | 1,788.1       | 11/05/73      | 10,950,000     | 504,776      | 11,454,776  | 442                             | 61,782,446                                | 108,902,872                                | 57%  |
| C/S11368  | IL8535     | Hollywood Rd., Shueng Wan             | Sheung Wan    | Residential | A                       | 3.800      | 63.5          | 12/12/79      | 1,600,000      |              | 1,600,000   | 1,000                           | 5,511,528                                 | 6,882,783                                  | 80%  |
| C/S9761   | IL8223     | Tin Hau Temple Rd., North Point       | North Point   | Residential | A                       | 4.400      | 5,381         | 09/28/70      | 7,100,000      | 296,267      | 7,396,267   | 1,330                           | 49,834,998                                | 513,262,241                                | 10%  |
| C/S10706  | IL8357     | Cloud View Rd, North Point            | North Point   | Residential | A                       | 5.000      | 3,903.3       | 09/27/74      | 7,100,000      | 200,558      | 7,300,558   | 1,000                           | 35,683,614                                | 423,084,749                                | 8%   |
| C/S10364  | NKIL5415   | Fessenden Rd., Kowloon Tong           | Kowloon Tong  | Residential | A                       | 3.250      | 1,564.1       | 12/08/72      | 6,730,000      |              | 6,730,000   | 386                             | 39,417,039                                | 95,261,712                                 | 41%  |
| C/E10804  | IL8240-41  | Cloud View Rd, North Point            | North Point   | Residential | A                       | 5.000      | 6,566.0       | 05/21/75      | 7,720,000      | 80,480       | 7,800,480   | 2,000                           | 38,204,236                                | 711,688,989                                | 5%   |
| C/S10334  | NKIL5392   | Broadcast Dr., Kowloon Tong           | Kowloon Tong  | Residential | A                       | 3.250      | 1,502.8       | 10/27/72      | 6,500,000      | 14,446       | 6,514,446   | 372                             | 38,168,988                                | 91,525,958                                 | 42%  |
| C/S11310  | KIL10639   | 460 Shanghai St., Mong Kok            | Mong Kok      | Residential | A                       | 5.000      | 87.4          | 04/26/79      | 1,750,000      |              | 1,750,000   | 1,000                           | 6,792,551                                 | 8,564,715                                  | 79%  |
| C/S10780  | NKIL5620   | Marconi Rd., Kowloon Tong             | Kowloon Tong  | Residential | A                       | 2.400      | 1,698.9       | 04/18/75      | 4,500,000      | 5,769        | 4,505,769   | 1,000                           | 22,060,755                                | 76,407,913                                 | 29%  |
| C/S11202  | IL8359     | off Tin Hau Temple Rd., North Point   | North Point   | Residential | A                       | 4.700      | 4,400.0       | 06/02/78      | 75,000,000     | 1,200        | 75,001,200  | 1,000                           | 307,237,990                               | 448,302,212                                | 69%  |
| C/S10419  | KIL10220   | Argyle St, Mong Kok                   | Mong Kok      | Residential | A                       | 5.000      | 1,487.0       | 01/26/73      | 16,600,000     | 13,462       | 16,613,462  | 588                             | 97,288,549                                | 145,716,654                                | 67%  |
| C/S10139  | KIL10081   | 818 Canton Rd., Yau Ma Tei            | Yau Ma Tei    | Residential | A                       | 5.000      | 1,474.9       | 03/20/72      | 300,000        |              | 300,000     | 50                              | 1,881,969                                 | 6,584,570                                  | 29%  |
| C/S10044  | IL8238     | Mount Butler Rd., Causeway Bay        | Causeway Bay  | Residential | A                       | 4.500      | 3,741.6       | 10/26/71      | 2,750,000      |              | 2,750,000   | 344                             | 17,244,895                                | 365,001,257                                | 5%   |
| C/S9930   | KIL9850    | Argyle Rd., Mong Kok                  | Mong Kok      | Residential | A                       | 3.500      | 1,787.2       | 06/28/71      | 4,670,000      |              | 4,670,000   | 706                             | 31,490,229                                | 122,593,243                                | 26%  |
| C/S10526  | KIL10277   | Ho Man Tin Hill Rd, Ho Man Tin        | Ho Man Tin    | Residential | A                       | 4.000      | 2,884.8       | 10/26/73      | 13,500,000     | 120,751      | 13,620,751  | 1,000                           | 73,635,012                                | 226,152,247                                | 33%  |
| C/S10368  | KIL10138   | 39C Battery St., Yau Ma Tei           | Yau Ma Tei    | Residential | A                       | 5.000      | 67.6          | 12/22/72      | 320,000        |              | 320,000     | 66                              | 1,876,639                                 | 6,621,000                                  | 28%  |
| C/S9782   | IL8242     | Mt. Davis Road, Western               | Western       | Residential | A                       | 0.75       | 1,766.0       | 11/23/70      | 350,000        | 6,479        | 356,479     | 436                             | 2,266,228                                 | 28,709,322                                 | 8%   |
| C/S10036  | IL8237     | Mount Butler Rd., Causeway Bay        | Causeway Bay  | Residential | A                       | 4.320      | 1,850.4       | 10/26/71      | 6,500,000      |              | 6,500,000   | 924                             | 40,766,951                                | 173,285,843                                | 24%  |
| C/S10436  | KIL10137   | 14 Battery St., Yau Ma Tei            | Yau Ma Tei    | Residential | A                       | 5.000      | 68.2          | 03/30/73      | 500,000        |              | 500,000     | 68                              | 2,930,460                                 | 6,684,752                                  | 44%  |
| C/S11178  | KIL10591   | 160 Shanghai St., Yau Ma Tei*         | Yau Ma Tei    | Residential | A                       | 5.000      | 61.6          | 03/03/78      | 1,300,000      | 9,262        | 1,309,262   | 1,000                           | 5,390,701                                 | 6,036,458                                  | 95%  |
| C/S10112  | IL8037     | Tai Hang Rd., Causeway Bay            | Causeway Bay  | Residential | A                       | 5.000      | 1,360.6       | 12/17/71      | 2,170,000      |              | 2,170,000   | 384                             | 13,614,174                                | 147,475,255                                | 9%   |
| C/S10700  | IL8366     | Cloud View Rd, North Point            | North Point   | Residential | A                       | 5.000      | 5,111.5       | 08/23/74      | 10,000,000     | 275,188      | 10,275,188  | 1,000                           | 50,274,121                                | 554,039,552                                | 9%   |
| C/S10111  | IL8036     | Tai Hang Rd., Causeway Bay            | Causeway Bay  | Residential | A                       | 5.000      | 280.3         | 12/17/71      | 2,110,000      |              | 2,110,000   | 336                             | 13,235,625                                | 30,381,514                                 | 44%  |
| C/S11092  | KIL10548   | Tsim Sha Tsui East                    | Tsim Sha Tsui | Retail      | C                       | 8.666      | 2,656.5       | 06/07/77      | 68,000,000     | 146,679      | 68,146,679  | 1,000                           | 292,543,149                               | 1,455,799,674                              | 20%  |
| C/S10983  | KIL10474   | Tsim Sha Tsui East                    | Tsim Sha Tsui | Retail      | C                       | 5.000      | 2,560.0       | 12/28/76      | 59,000,000     | 3,617,353    | 62,617,353  | 1,000                           | 269,660,905                               | 809,437,056                                | 33%  |
| C/S11162  | KIL10587   | Tsim Sha Tsui East                    | Tsim Sha Tsui | Retail      | C                       | 8.250      | 1,550.0       | 01/17/78      | 80,000,000     |              | 80,000,000  | 1,000                           | 327,713,891                               | 808,646,590                                | 41%  |
| C/S11258  | KIL10603   | Tsim Sha Tsui East                    | Tsim Sha Tsui | Retail      | C                       | 12.000     | 1,380.0       | 10/30/78      | 124,000,000    |              | 124,000,000 | 1,000                           | 479,640,403                               | 1,047,209,191                              | 65%  |
| C/S10343  | IL8304     | Shek Pai Wan Rd., Aberdeen            | Aberdeen      | Supermarket | C                       | 2.400      | 2,078.1       | 11/24/72      | 9,900,000      |              | 9,900,000   | 514                             | 57,981,235                                | 282,748,950                                | 21%  |
| C/S10114  | IL8287     | Parkin's Rd., Causeway Bay            | Causeway Bay  | Supermarket | A                       | 0.700      | 1,552.0       | 01/17/72      | 1,830,000      | 1,668,439    | 3,498,439   | 364                             | 18,980,055                                | 61,593,158                                 | 31%  |
| C/S10294  | IL8303     | Cloud View Rd., North Point           | North Point   | Supermarket | A                       | 1.200      | 993.5         | 09/15/72      | 4,700,000      | 109,687      | 4,809,687   | 246                             | 28,221,222                                | 67,589,138                                 | 42%  |

Mean

39%

Source: Collected by the author from 92 randomly selected land contracts issued between 1970 and 1979. Information about these land contracts is gathered from microfilms obtained from the Land Registry of Hong Kong.

Note: \* The estimated 1994 land value is calculated using the residual method, and the description of the procedures is provided in the text.

Sq. m. = Square Meter

T.S.T. = Tsim Sha Tsui

C.W. = Chai Wai

C/S = Conditions of Sale

Ind/Godown = Industrial and Godown

arrangements. Besides, there is no explicit policy statement from the Hong Kong government on what percentage of the land-value increments they want to recoup through land leasing. I, therefore, cannot judge whether the estimated average percentage is "adequate" from a policy standpoint. Despite the lack of comparison, the calculated percentage is still useful. When I combine this finding with the percentage of infrastructure expenditures financed by the captured value, I can assess the Hong Kong experience based on the two criteria established in the beginning of this chapter.

Second, the 1991 land prices are approximated figures, the calculated percentages of land-value capture will depend upon the accuracy of these estimates. To test how sensitive the calculation of these percentages is to errors of estimating the 1991 land prices, I increased and decreased these estimates by 5 and 10 percent. Table 5-3 shows the impacts of changing the land-value estimates on the average percentage of land-value capture.

Increasing the 1991 land prices by 10 percent decreases the percentage of land-value captured by 3.6 percent. Reducing the land prices by 10 percent will increase the percentage by 4.3 percent. Effects of a 5-percent increase or decrease in the land prices will not exceed 2.1 percent. Results of the sensitivity test indicate that if my calculations for the 1991 land prices are not over- or under-estimated by more than 10 percent, the average percentage of land-value capture will fall within the range of 36 to 43 percent. These results indicate that errors within the range of 10 percent in estimating the land values do not significantly affect the calculation of the average percentage of land-value capture.

To analyze the data at a less aggregate level, I examined the estimated percentages of land-value capture for land sites located in different districts and for various land uses. I summarize the results in Table 5-4. By arranging the percentages by district and land use, I am not trying to draw conclusions on what the percentages of land-value capture will be for these categories. To do that, I need to construct a stratified random sample for different districts. My purpose in presenting these figures is to analyze further how the percentages for these different categories deviate from

**Table 5-3. SENSITIVITY ANALYSIS OF THE ESTIMATED LAND VALUES  
(Percent)**

| Percentage Change in the<br>Estimated Land Values | <u>Estimated Percentage of Land-value Capture</u> |            |
|---|---|------------|
|   | Actual Estimates                                  | Changes    |
|   | Original with<br>No Change:                       | 39.1       |
| <u>For the 1991 Land Value</u>                    |   |            |
| Increase by:                                      |   |            |
|   | 10  | 35.5 (3.6) |
|   | 5   | 37.2 (1.9) |
| Decrease by:                                      |   |            |
|   | 10  | 43.4 4.3   |
|   | 5   | 41.2 2.1   |

Source: Calculated by the author using data presented in Table 5-2.

Note:

$$PLVC = \frac{(Prm-Ini + Prm-Mod + R)}{LV91}$$

where

- PLVC = Percentage of Land-Value Capture
- Prm-Ini = Premia from Initial Auctions
- Prm-Mod = Premia from Lease Modifications
- R = Annual Rent
- LV91 = Estimated 1991 Land Value

**Table 5-4. PERCENTAGE OF LAND-VALUE CAPTURE FOR SELECTED LAND SITES**

| District                      | Residential |        |        | Offices |        |      | Retails | Hotel  | Industrial & Godown | Supermarket | Bus Terminal | District ** | Average |
|-------------------------------|-------------|--------|--------|---------|--------|------|---------|--------|---------------------|-------------|--------------|-------------|---------|
|                               | A           | B      | C      | A       | B      | C    |         |        |                     |             |              |             |         |
| <b>COMMERCIAL DISTRICTS:</b>  |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| In Hong Kong Island           |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| Shueng Wan                    | 48.0        |        |        | 47.6    | 60.8   | 58.0 |         | 50.8 * |                     |             |              | 54.8        | } 34.2  |
| Central                       |             |        |        |         |        |      |         | 36.2 * |                     |             | 55.7 *       | 45.9        |         |
| Wai Chai                      |             |        |        | 6.6 *   |        |      |         |        |                     |             |              | 6.6         |         |
| In Kowloon                    |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| Tsim Sha Tsui                 |             |        |        | 11.7    |        |      | 39.7    | 61.1 * |                     |             |              | 29.6        |         |
| <b>RESIDENTIAL DISTRICTS:</b> |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| In Hong Kong Island           |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| Western                       | 7.9 *       |        |        |         |        |      |         |        |                     |             |              | 7.9         | } 42.6  |
| North Point                   | 29.5        | 31.1   | 21.7 * |         | 30.0 * |      |         | 16.1 * |                     | 41.8 *      |              | 29.2        |         |
| Causeway Bay                  | 20.3        |        |        |         |        |      |         |        |                     | 30.8 *      |              | 22.4        |         |
| Abredeen                      |             |        |        |         |        |      |         |        |                     | 20.5 *      |              | 20.5        |         |
| In Kowloon                    |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| Yau Ma Tei                    | 49.0        | 78.9   |        |         |        |      |         |        |                     |             |              | 61.8        | } 42.6  |
| Mong Kok                      | 57.3        |        |        |         |        |      |         |        |                     |             |              | 57.3        |         |
| Hung Hom                      |             |        | 90.1 * |         |        |      |         |        |                     |             |              | 90.1        |         |
| Ho Man Tin                    | 32.6 *      |        |        |         |        |      |         |        |                     |             |              | 32.6        |         |
| In New Kowloon                |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| Kowloon Tong                  | 42.2        | 39.9   |        |         |        |      |         |        |                     |             |              | 41.0        | } 42.6  |
| Shek Kip Mei                  |             | 44.5 * | 72.9   |         |        |      |         |        |                     |             |              | 63.4        |         |
| <b>INDUSTRIAL DISTRICTS:</b>  |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| In New Kowloon                |             |        |        |         |        |      |         |        |                     |             |              |             |         |
| Kwun Tong                     | 12.9        | 11.6 * |        |         |        |      |         |        |                     |             |              | 12.7        | } 13.3  |
| Cheung Sha Wan                |             |        |        |         |        |      |         |        |                     |             |              | 13.9        |         |
| Land uses **                  | 35.4        | 57.7   | 64.4   | 30.8    | 50.6   | 58.9 | 39.7    | 49.9   | 13.8                | 31.0        | 55.7         | 39.1        |         |
| Average                       | 52.5        |        |        | 46.8    |        |      |         |        |                     |             |              |             |         |

Note: \* There is only one observation for the corresponding district and land use in the sample.

\*\* Figures in the Land Use row and District column are not the weighted average of the numbers presented in the table. Blank cell indicates that there is no observation for the corresponding district and land use in the sample.

Source: The author calculated these percentages using data gathered from 92 land sites selected from all contracts issued in Hong Kong between 1970 and 1979, (Table 5-2).

the overall mean. This, in turn, shows how instrumental the estimated average percentage of land-value capture is.

Between 1970 and 1991, the government captured approximately 35 percent of the increases in value for selected land sites leased for the development of Class A residential buildings. The classification of residential property is based on the saleable floor area as follows (Commissioner of Rating and Valuation, 1992, ANNEX F):

Class A--saleable area not exceeding 39.9 m<sup>2</sup>

Class B--saleable area of 40 m<sup>2</sup> to 69.9 m<sup>2</sup>

Class C--saleable area of 70 m<sup>2</sup> to 99.9 m<sup>2</sup>

Class D--saleable area of 100 m<sup>2</sup> to 159.9 m<sup>2</sup>

Class E--saleable area of at least 160.0 m<sup>2</sup>

For land sites used for Class B residential development, the government retained 58 percent of the land-value increments. For Class C, the percentage was 64 percent. On average, the percentage of land-value capture for residential land sites was 52 percent. It was about 12 percent larger than the overall average of 39 percent.

The percentages of land-value capture for Class A, B, and C office buildings were 31, 51, and 59 percent, respectively. The classification of office buildings is based on the average size of the floor area of the property. Office buildings that have an average size of 354, 84, and 47m<sup>2</sup> are classified as Class A, B, and C properties, accordingly. In other words, the percentage of land-value capture for the smaller office buildings was larger than bigger commercial properties. The average percentage for land used for office buildings was 47 percent, which was reasonably close to the overall average.

For industrial land sites, the percentages were small. They were about 14 percent for industrial land sites located either in Kwun Tong and Cheung Sha Wan. I can explain these results by the general land policy in Hong Kong. To stimulate industrial development, the government leased land to industrialists at a low premium through the Conditions of Grant and that, in turn, led to a slower increase in industrial land prices. It is, thus, not surprising to see that the percentages of land-value capture

were relatively smaller from industrial land sites than land parcels for other types of land use.

In terms of the different districts, the average percentage of land-value capture in the commercial areas, such as Sheung Wan, Central, Wai Chai, and Tsim Sha Tsui, was about 34 percent. For the residential districts, the average percentage was 43 percent. Some districts, such as Yau Ma Tei, Mong Kok, and Shek Kip Mei, had approximately 60 percent of the surplus land value captured by the government. I excluded Hung Hom because there is only one observation for this district in my sample. Among these residential districts, the closer a district was to a commercial or an industrial center, the higher the percentages.

In sum, the percentages of land-value capture for various types of land in different locations are reasonably close to the overall average of 39 percent. The only exception is the land sites used for residential and industrial purposes.

### **The Role of Land Revenues in Infrastructure Expenditures**

Estimating what proportion of the increased land value the government captured through land leasing tells only half of the story. We still need to know how significant the captured value is in financing infrastructure expenditures. In Hong Kong, the captured land value by leasing land only accounts for a portion of the total land revenues. Here, I define land revenues as the total money collected from the property tax, rates, rent, and land premia. (See Chapter 4 for the definition of the property tax and rates.) In Table 5-5, I show that between 1970 and 1991, the average annual amount of the property tax and rates collected accounted for 31 percent of the average annual land revenues. The lease revenues, which are composed of land rent and premia received from the initial auctions, lease modifications, and renewals, accounted for the remaining 69 percent. Lease revenues are, thus, not a substitute for the property tax and rates in Hong Kong. In fact, the four mechanisms available under the leasehold system, at least in theory, provide additional ways for the government to capture the land-value increments. The Hong Kong case indicates that

**Table 5-5. LAND AND LEASE REVENUES IN HONG KONG, 1970-1991  
(Million of 1991 U.S. Dollars)**

| Type of Land Revenues | Average Annual Amount | Percentage of Average Annual |                                 |                                     |                                   |
|-----------------------|-----------------------|------------------------------|---------------------------------|-------------------------------------|-----------------------------------|
|                       |                       | Total Land Revenues          | Total Local Government Revenues | Total Local Government Expenditures | Total Infrastructure Expenditures |
| Property tax Rates    | 130                   | 9.1                          | 1.8                             | 2.0                                 | 7.2                               |
| Lease Revenues        | 307                   | 21.5                         | 4.3                             | 4.7                                 | 17.1                              |
|                       | 990                   | 69.4                         | 14.0                            | 15.1                                | 55.2                              |
| <b>Total</b>          | <b>1,427.0</b>        | <b>100.0</b>                 | <b>20.1</b>                     | <b>21.7</b>                         | <b>79.6</b>                       |

Sources: From Appendix D.

these four mechanisms are not necessarily incompatible with the imposition of property taxes that the government must use either one or the other.

I stated in Chapter 1 that according to the 1984 Sino-British Joint Declaration, the PRC government is keeping half of the revenues generated from land leasing for infrastructure investment after 1997. The retained revenues were not included in the data that I gathered from government publications. Hence, the PRC-British arrangement may underestimate the proportion of lease revenues in the average annual land revenues between 1984 and 1991.

For infrastructure expenditures, I included spending on highways, land, the airport, seaports, parks and other recreational activities, parking facilities, utilities, water and sewage, housing, and environmental protection. I emphasize these types of government expenditures because part of the increases in land value is due to these investments in public works. The government, therefore, has legitimacy in recouping the part of the land-value increments generated by these investments.

In Table 5-5, I also show that the average annual land revenues generated from the property tax and rates were, on average, about 24 percent of the infrastructure expenditures in Hong Kong annually. The funds raised annually by leasing public land financed an average of 55 percent of the public-work expenditures. Put differently, the average annual land revenues covered about 80 percent of the average annual infrastructure expenditures between 1970 and 1991.

In order to estimate the relative significance of the percentage of land revenues in public infrastructure expenditures in Hong Kong. I compared the data for Hong Kong with those for other cities. I calculated the percentage of land revenues in infrastructure expenditures for Singapore and some cities in the United States. In analyzing the sizes of total revenues and infrastructure expenditures of these cities, I picked cities for which detailed infrastructure expenditures data are available. I selected Singapore and seven cities in the United States, namely, Washington, DC, New York City, Chicago, San Francisco, Philadelphia, and Los Angeles. All these cities had average annual revenues of more than US\$2 billion between 1970 and 1991.

(In this section, all monetary values are in constant 1991 U.S. dollars, unless otherwise indicated.)

For the U.S. cities, due to data limitations, land revenues include only property taxes and funds collected from special assessments. There will be few lease revenues for these cities, because very few local governments in the United States use land leasing to allocate public land. For Singapore, I obtained figures for both property taxes and income from land sales. Because the Singapore government does not lease all public land, I do not have data to separate lease revenues from the total land revenues. I, therefore, treat the total amount as land revenues here. To calculate the infrastructure expenditures for the selected cities, I employed the same definition as for Hong Kong. Similar to Hong Kong, all these cities (except New York City and Washington, DC) spent, on average, from US\$1 to 4 billion annually on infrastructure.

I am not trying to determine whether Hong Kong can finance a higher percentage of public works than in selected cities. This would require a careful comparison between Hong Kong and these cities, which is not easy for three reasons. First, the most common problem is the lack of relevant data. Information about government revenues and expenditures at the city level is usually not available. If these data are available, they are mostly from different sources. This, in turn, creates the problem of consistency in comparing these data.

Second, different countries may have different definitions for land revenues and infrastructure expenditures. In the United States, for example, revenues generated from "exaction" are not counted as part of the property taxes. They are usually referred to as "impact" or "development" fees (Altshuler and Gómez-Ibáñez, 1993, pp. 3-6). More importantly, exactions may be in-kind. In-kind exactions require developers to construct public facilities, such as roads and parking spaces, as a condition to obtain the development permits. These in-kind and monetary "receipts" by the city governments usually do not show up as land revenues. In other words, if land revenues as a percentage of infrastructure expenditures appears small for some U.S. cities, it may only mean that these city governments rely on the private provision of some public infrastructures.

Third, in Hong Kong, the government is solely responsible for all infrastructure expenditures. Yet, cities in other countries may rely partly or totally on the support of the central government. Again, if the percentages are small in the U.S. cities, it does not suggest that the city governments cannot capture the land-value increments as revenues for infrastructure expenditures. These governments may just not have to raise the money for these investments. All these factors, therefore, make cross-city comparisons difficult. In view of these difficulties, the inclusion of selected cities in my analysis is to highlight the experience of Hong Kong by showing what is happening in other places in the world and not to draw any conclusion from the comparison.

In Table 5-6, I present the results of my calculation. As I mentioned earlier, between 1970 and 1991, the average land revenues as a percentage of the Hong Kong government average total infrastructure expenditures annually were about 80 percent. Of the other cities, Singapore and New York City had the largest percentages, which were 62 and 59 percent, respectively. Yet, infrastructure expenditures in New York City were US\$10.9 billion, which was about ten times larger than in Singapore (US\$1.6 billion) and in Hong Kong (US\$ 1.8 billion) for the same period. Los Angeles had the smallest percentage, which was about 16 percent.

For cities that had a similar amount of annual infrastructure expenditures to Hong Kong between 1970 and 1991, the differences in the percentages between Hong Kong and these cities were more dramatic. These cities include Singapore, Chicago, San Francisco, and Philadelphia. Among these cities, only Singapore could support about 62 percent of its annual expenditures on public works. For Chicago, San Francisco, and Philadelphia, the percentages were 43, 37, and 21 percent, respectively. Similarly, the percentages of land revenues in total city government annual revenues and expenditures in Hong Kong were also larger than in some of the selected cities. Between 1970 and 1991, average annual land revenues in Hong Kong accounted for 20 percent of the average annual total government revenues. Chicago had a similar percentage. For the other cities, the percentages ranged from 19 percent (for New York City and Singapore) to only 11 percent (for Philadelphia). For the average

**Table 5-6. THE IMPORTANCE OF LAND REVENUES IN GOVERNMENT REVENUES, TOTAL EXPENDITURES,  
AND INFRASTRUCTURE EXPENDITURES FOR SELECTED CITIES  
(Million of 1991 U.S. Dollars)**

| City                       | Years     | Average<br>Annual<br>Total Land<br>Revenues | Average<br>Annual<br>Total Local<br>Government<br>Revenues | Average<br>Annual<br>Total Local<br>Government<br>Expenditures | Average<br>Annual<br>Total Local<br>Infrastructure<br>Expenditures | Average Annual Land Revenues<br>as a Percentage of Average Annual |   |   |
|----------------------------|-----------|---|--|--|--|---|---|---|
|                            |           |   |  |  |  | Total Local<br>Government<br>Revenues                             | Total Local<br>Government<br>Expenditures | Total Local<br>Infrastructure<br>Expenditures |
| Hong Kong                  | 1970-1991 | 1,427.0                                     | 7,091.6  | 6,565.6  | 1,793.4  | 20.1  | 21.7                                      | 79.6  |
| Singapore                  | 1972-1991 | 994.7                                       | 5,329.0  | 4,095.8  | 1,615.6  | 18.7  | 24.3                                      | 61.6  |
| New York City, New York    | 1970-1991 | 6,436.1                                     | 34,518.5   | 33,341.6   | 10,902.4   | 18.6  | 19.3                                      | 59.0  |
| Washington, D.C.           | 1970-1991 | 512.4                                       | 3,658.8  | 3,862.6  | 893.7  | 14.0  | 13.3                                      | 57.3  |
| Chicago, Illinois          | 1970-1991 | 657.6                                       | 3,295.2  | 3,239.4  | 1,524.3  | 20.0  | 20.3                                      | 43.1  |
| San Francisco, California  | 1970-1991 | 443.8                                       | 2,464.6  | 2,310.1  | 1,201.1  | 18.0  | 19.2                                      | 36.9  |
| Philadelphia, Pennsylvania | 1970-1991 | 337.0                                       | 3,121.7  | 3,178.4  | 1,621.8  | 10.8  | 10.6                                      | 20.8  |
| Los Angeles, California    | 1970-1991 | 611.9                                       | 4,893.1  | 4,562.2  | 3,939.5  | 12.5  | 13.4                                      | 15.5  |

Sources: From Appendix D.

annual total expenditures, the percentages for Hong Kong and Singapore were 22 and 24 percent, respectively. Among selected cities, New York City, Chicago, and San Francisco could finance close to an average of 20 percent of their total annual local expenditures by land revenues.

All this information, though scattered, indicates that land revenues in Hong Kong play an important role in financing total government expenditures, in general, and infrastructure investment, in particular. Specifically, given the statistics of these major cities in other parts of the world, the percentage of the average annual land revenues in public infrastructure expenditures in Hong Kong appears to be large. Because payments received through land leasing accounted for 69 percent of the total land revenues, I argue that the value captured from land contracts played an important role in financing public works.

### Conclusion

After constructing the percentages of land-value capture and the percentage of land revenues in public infrastructure expenditures, I combine these two indicators and place the outcomes in one of the quadrants in Figure 5-1. I discovered that the Hong Kong government captured, on average, 39 percent of the land-value increments occurring between 1970 and 1991 from land leased in the 1970s. This captured value accounted for a large proportion of the total annual land revenues for the same period. Specifically, payments received from land leasing paid about 55 percent of the average annual infrastructure expenditures. Combined with the money collected from the property tax and rates, the Hong Kong government seemed capable of funding a large percentage--80 percent--of its annual public works expenditures by land revenues. Based on these results, I place Hong Kong somewhere in the middle of Quadrants II and IV in that public investments are considered to be sustainable. In Hong Kong, the government did not borrow any money from the World Bank or other international aid agencies. Major public infrastructure projects are financed either by government land revenues or internally generated funds.

Given the exceptional ability of the government to self-finance public infrastructure, the Hong Kong land-leasing system may, indeed, be a valuable model for other countries to follow. Yet, to emulate the "model," we must first understand the necessary institutions that support the system. Moreover, I must show which of the four mechanisms of land-value capturing works best, what transaction costs are associated with each mechanism, and how the involved parties minimize these costs. These are the issues that I will consider in Chapters 6 and 7.

## CHAPTER 6

### INITIAL AUCTION AND LEASE MODIFICATION

According to some analysts, one major advantage of adopting a leasehold system is the possibility of capturing the *future* increases in land value. I emphasize the retainment of the future increases because governments, normally, cannot obtain much money by leasing land to private developers when the development of the real estate market is at its initial stage. At this stage, land prices are normally low. Land prices will increase when the economy grows. The state will reap the financial gains of increases in land prices only if it can capture this subsequent appreciation in land value. In Chapter 5, I argued that the Hong Kong government was capable of capturing the land-value increments; the purpose of this and the next chapters is to examine how the government did that.

In this chapter, I focus only on payments received from the four mechanisms, which I called the lease revenues in Chapter 5. I first offer a general view on the relative significance of land rent and different premia in lease revenues between 1970 and 1990.<sup>1</sup> Certainly, funds generated from the property tax and rates, which account for about one-third of the total land revenues, will affect the aggressiveness of the government in capturing the land value through land leasing. Yet, they are not part of the mechanisms specified in the land contracts; therefore, I will not deal with them here. Second, I present results of my regression analysis of the data gathered from my contract-based case studies. The purpose of my analysis is to examine the correlation between the percentages of land-value capture and other potential determining factors, such as the premia collected from lease modifications and rent. Finally, I apply the transaction-costs concept to identify the costs associated with the land-value capture at the initial auctions and during contract modifications. I then utilize the framework

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<sup>1</sup> In Chapter 5, I used 1991 as the terminal year. Here I use 1990, because the government was revising the 1991 figures for premia received from different mechanisms when I was conducting my research in Hong Kong in 1993. Hence, I was not able to collect the 1991 data for my analysis. I do not expect that the omission of the 1991 data significantly affects my arguments.

developed in Chapter 3 to analyze how the involved parties use different strategies to minimize these costs. I will discuss the land-value capture during the lease renewals in Chapter 7.

### **Lease Revenues Collected from the Four Mechanisms**

To have an overview of how the government captured the land value using the four mechanisms, I analyzed data published by the Hong Kong government. In Table 6-1, I show the total payments received by the government between 1970 and 1990 for three different premia and land rent. Among the three premia, payments received from the initial land auctions accounted for the largest percentages of the total premia. Ninety-one percent of the total premia was from the initial auctions. Within this 21-year period, none of these years had percentages of less than 60 percent. Especially during the 1980s, premia from the initial auctions contributed more than 90 percent of the total annual land premia. (There are problems with these data, which I will discuss later.) In terms of the percentage of the total lease revenues, premia from initial auctions accounted for 90 percent during the study period.

For payments from lease modifications and renewals and land rent, their percentages in the total premia and lease revenues were, relatively, much smaller than for money received from the initial auctions. The percentages of payments from lease modifications in total premia and lease revenues were both 8 percents between 1970 and 1990. For individual years, the percentages of modification premia in total premia ranged from less than 0.1 percent in 1990 to 25 percent in 1977.

Funds collected from lease renewals accounted for only 2 percent of the total land premia and total lease revenues. The biggest percentage of payments received from lease renewals in total premia occurred in 1972, which was 18 percent. In 1981 and 1982, the percentages dropped to their lowest level and were only 0.3 percent. Land rent had the smallest average percentage of the total lease revenues, which was only 1 percent. All these data suggest that between 1970 and 1990 the government

**Table 6-1. LEASE REVENUES OF HONG KONG: 1970 - 1990**  
(Millions of 1991 HK Dollars)

| Year  | Initial Leases  |                       |                   | PREMIA COLLECTED FROM     |                   |                           |                           |                           |              | Land Rent | % of Total Lease Revenues | Total Lease Revenues |     |           |
|-------|-----------------|-----------------------|-------------------|---------------------------|-------------------|---------------------------|---------------------------|---------------------------|--------------|-----------|---------------------------|----------------------|-----|-----------|
|       | Amount          |                       | % of Total Premia | Lease Modification        |                   |                           | Lease Renewal             |                           |              |           |                           |                      |     |           |
|       | Public Auctions | Private Treaty Grants |                   | % of Total Lease Revenues | % of Total Premia | % of Total Lease Revenues | % of Total Lease Revenues | % of Total Lease Revenues | Total Premia |           |                           |                      |     |           |
| 1970  | 321.5           | 71.9                  | 67.7              | 65.3                      | 98.2              | 16.9                      | 16.3                      | 89.1                      | 15.3         | 14.8      | 580.6                     | 21.6                 | 3.6 | 602.2     |
| 1971  | 770.0           | 75.7                  | 67.0              | 65.8                      | 214.6             | 17.0                      | 16.7                      | 202.0                     | 16.0         | 15.7      | 1,262.3                   | 22.8                 | 1.8 | 1,285.0   |
| 1972  | 739.4           | 20.0                  | 64.8              | 62.8                      | 204.7             | 17.5                      | 16.9                      | 208.6                     | 17.8         | 17.2      | 1,172.7                   | 37.4                 | 3.1 | 1,210.1   |
| 1973  | 2,037.0         | 24.1                  | 84.2              | 82.5                      | 204.7             | 8.4                       | 8.2                       | 183.5                     | 7.5          | 7.3       | 2,449.3                   | 47.9                 | 1.9 | 2,497.2   |
| 1974  | 824.4           | 62.5                  | 76.1              | 72.4                      | 204.4             | 17.5                      | 16.7                      | 73.5                      | 6.3          | 6.0       | 1,164.7                   | 60.0                 | 4.9 | 1,224.7   |
| 1975  | 661.4           | 58.2                  | 73.7              | 70.3                      | 215.3             | 22.0                      | 21.0                      | 42.2                      | 4.3          | 4.1       | 977.0                     | 47.3                 | 4.6 | 1,024.3   |
| 1976  | 707.6           | 136.4                 | 74.6              | 71.4                      | 218.4             | 19.3                      | 18.5                      | 68.7                      | 6.1          | 5.8       | 1,131.1                   | 50.4                 | 4.3 | 1,181.4   |
| 1977  | 951.0           | 75.2                  | 62.9              | 60.9                      | 401.9             | 24.6                      | 23.8                      | 203.1                     | 12.5         | 12.1      | 1,631.2                   | 54.1                 | 3.2 | 1,685.3   |
| 1978  | 1,934.4         | 2,625.4               | 85.1              | 84.2                      | 636.3             | 11.9                      | 11.7                      | 163.9                     | 3.1          | 3.0       | 5,360.1                   | 57.7                 | 1.1 | 5,417.7   |
| 1979  | 3,042.5         | 1,149.0               | 83.4              | 82.5                      | 750.7             | 14.9                      | 14.8                      | 85.1                      | 1.7          | 1.7       | 5,027.4                   | 52.8                 | 1.0 | 5,080.2   |
| 1980  | 5,758.3         | 292.7                 | 84.9              | 84.2                      | 993.8             | 13.9                      | 13.8                      | 79.4                      | 1.1          | 1.1       | 7,124.2                   | 62.8                 | 0.9 | 7,187.0   |
| 1981  | 19,831.1        | 1,455.6               | 92.6              | 92.3                      | 1,640.5           | 7.1                       | 7.1                       | 62.3                      | 0.3          | 0.3       | 22,989.5                  | 60.8                 | 0.3 | 23,050.4  |
| 1982  | 15,342.6        | 1,932.9               | 92.5              | 92.2                      | 1,331.1           | 7.1                       | 7.1                       | 60.2                      | 0.3          | 0.3       | 18,666.8                  | 61.9                 | 0.3 | 18,728.7  |
| 1983  | 7,234.2         | 981.4                 | 92.7              | 92.0                      | 551.7             | 6.2                       | 6.2                       | 96.9                      | 1.1          | 1.1       | 8,864.2                   | 64.4                 | 0.7 | 8,928.6   |
| 1984  | 2,767.6         | 549.8                 | 90.4              | 88.7                      | 291.8             | 8.0                       | 7.8                       | 60.2                      | 1.6          | 1.6       | 3,669.5                   | 71.4                 | 1.9 | 3,740.8   |
| 1985  | 4,646.1         | 973.1                 | 84.2              | 83.3                      | 1,021.3           | 15.3                      | 15.1                      | 33.3                      | 0.5          | 0.5       | 6,673.8                   | 71.3                 | 1.1 | 6,745.1   |
| 1986  | 4,115.0         | 2,347.1               | 95.4              | 94.2                      | 277.6             | 4.1                       | 4.0                       | 35.1                      | 0.5          | 0.5       | 6,774.8                   | 84.5                 | 1.2 | 6,859.3   |
| 1987  | 3,796.7         | 386.4                 | 94.9              | 92.9                      | 172.7             | 3.9                       | 3.8                       | 51.3                      | 1.2          | 1.1       | 4,407.0                   | 94.4                 | 2.1 | 4,501.4   |
| 1988  | 5,010.4         | 222.8                 | 99.0              | 97.2                      | 11.7              | 0.2                       | 0.2                       | 40.4                      | 0.8          | 0.8       | 5,285.3                   | 97.9                 | 1.8 | 5,383.2   |
| 1989  | 8,125.0         | n.a.                  | 99.2              | 98.0                      | 34.1              | 0.4                       | 0.4                       | 34.2                      | 0.4          | 0.4       | 8,193.3                   | 101.6                | 1.2 | 8,294.9   |
| 1990  | 9,259.1         | n.a.                  | 99.6              | 98.2                      | 3.6               | 0.0 *                     | 0.0 *                     | 35.0                      | 0.4          | 0.4       | 9,297.8                   | 131.3                | 1.4 | 9,429.1   |
| TOTAL | 97,875.2        | 13,440.3              | 90.7              | 89.7                      | 9,478.9           | 7.7                       | 7.6                       | 1,908.0                   | 1.6          | 1.5       | 122,702.3                 | 1,354.3              | 1.1 | 124,056.6 |

Sources: Annual Report of the Director of Accounting Services and the Accounts of Hong Kong, 1970-1990  
Annual Report of the Land Registrar's Office of Hong Kong, 1970-1990

\* Value less than 0.05.

obtained the major part of its lease revenues from premia collected from the initial auctions.

Two factors, however, complicate the interpretation of these numbers. One problem is that before 1981, the government gave lessees the option to pay their premia for the initial leasing of land in installments, which I discussed in Chapter 4. The major purpose of this scheme was to encourage investment in the property market that was very sluggish in 1969. In Table 6-1, the percentages of total land premia gathered from initial auctions between 1970 and 1979 were relatively smaller than in some of the other years, because they include only the installments received, not the total premia generated, from initial auctions.

Moreover, lessees, for instance, could pay their premia for lease renewals by installments for up to 80 years in 1957 but only for up to 21 years after 1960. Because the government spread the collection of premia for lease renewals over a long period, premia collected from this mechanism can appear smaller than premia from the initial auctions during my study period. Yet, the sum of all installments can still be a significant amount of money. Premia for lease modifications are usually not paid in installments. Only when the premium for lease modifications was more than HK\$10 million could lessees pay the premium in 10 equal installments with an interest charge of 10 percent annually.

With the payments from the initial auctions and lease renewals stretching over a longer period and, thus, appearing smaller, the percentages of premia collected from lease modifications in total lease revenues could appear larger than they should be in Table 6-1. Hence, these figures may underestimate the percentages of premia collected from the initial auctions and lease renewals in the total lease revenues.

Another problem is that these figures underestimate the lease revenues collected by the government between 1984 and 1990. As I mentioned earlier, starting in 1984, all revenues collected from land transactions are now divided between the current government and the future Chinese administration of Hong Kong. The existing Hong Kong government has been depositing its share of lease revenues into a special fund account, called the "Capital Reserve Fund," for the purpose of financing public

infrastructure. For the share that the Chinese government takes, it deposits it into a bank operated in Hong Kong (Hong Kong Annual Yearbook, 1984). Owing to this arrangement, there were apparent decreases in lease revenues collected by the existing government between 1984 and 1990. These figures, however, did not take into the account the share of lease revenues that the future government of Hong Kong collected. This omission may, therefore, underestimate these figures by up to 50 percent.

Due to these two complications, premia received from the initial auctions should be higher than 90 percent of the total lease revenues between 1970 and 1990. To study further the exact percentages, I examined the data that I gathered from my case studies. Moreover, from these macro data, I cannot tell whether the government chose to rely on the initial auctions or had to employ this method due to some inherent difficulties of capturing land value through other mechanisms. In other words, the government could have captured a large portion of land value by negotiating with lessees for more money during lease modifications and renewals; yet, because revenues generated from the initial auctions, the property tax, and rates were sufficient to cover a major part of the public works expenditures, the government might not have been aggressive in demanding additional payments from lessees when they modified and renewed their leases. It is, therefore, necessary to examine the dynamics of land-value capture at a more micro level. To do that, I present results of the regression analysis on data gathered from my contract-based case studies.

### **Regression Analysis of the Percentages of Land-Value Capture**

In Chapter 5, I calculated the percentages of land-value capture for selected land sites leased between 1970 and 1979. Although I identified the differences in the percentages of land-value capture among these land parcels, I did not provide any explanation for the variations. In order to explain these different outcomes, I will use a simple regression model to identify the possible correlations between the percentages of land-value capture and other variables, such as the lot size, floor-area ratio, location, land uses, and date-of-issue. More specifically, I want to test the hypothesis

that premia collected from lease modifications have a significant impact on the sizes of the percentages of land-value capture.

The specification of the regression model is as follows:

$$\text{PLVC} = \beta_1 + \beta_2\text{AREA} + \beta_3\text{DATE} + \beta_4\text{MOD} + \beta_5\text{FAR} + \beta_6\text{OFFICE} + \beta_7\text{RESIDENTIAL} + \beta_8\text{HK} + \beta_9\text{KLN} + \beta_{10}\text{HOTEL} + \beta_{11}\text{IND} + \beta_{12}\text{RETAIL} + \beta_{13}\text{SUPER} + \beta_{14}\text{RENT} + \varepsilon$$

where

|             |   |   |
|-------------|---|---|
| PLVC        | = | Percentage of Land-value Captured <sup>2</sup>  |
| AREA        | = | Area of Land Parcel in Square Meters  |
| DATE        | = | Date Contract Issued  |
| MOD         | = | The 1991 Present Value of Premia Collected From Modifications of Contract Conditions                    |
| FAR         | = | Floor Area Ratio  |
| OFFICE      | = | $\begin{cases} 1 & \text{if classified as Office Building Site} \\ 0 & \text{otherwise} \end{cases}$    |
| RESIDENTIAL | = | $\begin{cases} 1 & \text{if classified as Residential Site} \\ 0 & \text{otherwise} \end{cases}$        |
| HK          | = | $\begin{cases} 1 & \text{if located in Hong Kong Island} \\ 0 & \text{otherwise} \end{cases}$           |
| KLN         | = | $\begin{cases} 1 & \text{if located in Kowloon Peninsula} \\ 0 & \text{otherwise} \end{cases}$          |
| HOTEL       | = | $\begin{cases} 1 & \text{if used for Hotel Purposes} \\ 0 & \text{otherwise} \end{cases}$               |
| IND         | = | $\begin{cases} 1 & \text{if used for Industrial Purposes} \\ 0 & \text{otherwise} \end{cases}$          |
| RETAIL      | = | $\begin{cases} 1 & \text{if used for Retail Purposes} \\ 0 & \text{otherwise} \end{cases}$              |
| SUPER       | = | $\begin{cases} 1 & \text{if used for Supermarket Purposes} \\ 0 & \text{otherwise} \end{cases}$         |
| RENT        | = | The 1991 Present Value of the Total Amount of Annual Land Rent Collected from the Date-of-issue to 1991 |

With the model, I measure: (1) the relative importance of the independent variables in determining the sizes of the estimated percentages and (2) the correlation between the percentages of land-value capture and various other independent variables. In

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<sup>2</sup> See Chapter 5 for the formula of the PLVC.

Table 6-2, I show the results of my regression analysis. I list all the independent variables according to their estimated significant t statistics in an ascending order.

There are three interesting observations from these results. First, premia collected from lease modifications (MOD) do not seem to be an important factor in explaining the sizes of the percentages of land-value capture (PLVC), thus disproving the hypothesis. Among all the independent variables, only two have significant t statistics smaller than 0.05. These variables are the date-of-issue (DATE) and the area of the land parcel in square meters (AREA). For the rest of the variables, their significant t statistics are larger than 0.05. This indicates that these variables are insignificant in helping me to interpret the differences in the PLVC among selected cases. More importantly, the estimated significant t statistics for MOD is 0.452, which is much higher than 0.05.

In reviewing the correlation coefficients for PLVC with all other independent variables in the model, I again find no strong correlation between PLVC and MOD. The correlation coefficient for the two variables is 0.033. The standardized beta coefficient for MOD is also very small, 0.059. These results show consistently that MOD is insignificant in determining the size of the PLVC. Based on these statistics, I find no strong evidence to support the hypothesis that premia from lease modifications have any correlation or that they have important impacts on the percentages of land-value capture for selected land sites in my study.

Second, land rent does not seem to have an impact on the PLVC. The estimated significant t statistics for RENT is 0.622, and the correlation coefficient between RENT and PLVC is only -0.097.

Third, the significant t statistic for the variable DATE (date-of-issue) is very small, which suggests that it is a very important variable in explaining the sizes of the PLVC. Besides, DATE has a very strong positive correlation with the PLVC, with a correlation coefficient of 0.679. In other words, the later that a contract was issued between 1970 and 1979, the bigger the percentage of land-value capture would be. I also find that DATE has the largest standardized beta coefficient, which is 0.744. In

**Table 6-2. RESULTS OF REGRESSION ANALYSIS ON FACTORS DETERMINING  
THE PERCENTAGES OF LAND-VALUE CAPTURE  
(Ranked by Significant t Statistics)**

| Variables                         | Symbol      | Coefficient | Standardized<br>Beta<br>Coefficient | t-Statistic | Significant<br>t | Correlation<br>Coefficient |
|-----------------------------------|-------------|-------------|-------------------------------------|-------------|------------------|----------------------------|
| Dependent Variable                |             |             |                                     |             |                  |                            |
| Percentage of Land Value Captured | PLVC        |             |                                     |             |                  |                            |
| Independent Variable              |             |             |                                     |             |                  |                            |
| Constant                          |             | -2673.846   |                                     |             |                  |                            |
| Date of issue                     | DATE        | 2.192E-07   | 0.744                               | 8.343       | 0.000            | 0.679                      |
| Area of Land Parcel (in Sq. m.)   | AREA        | -0.005      | -0.259                              | -2.865      | 0.005            | -0.216                     |
| Used for Retail Purposes          | RETAIL      | -24.312     | -0.184                              | -1.074      | 0.286            | 0.006                      |
| Located in Kowloon Peninsula      | KLN         | 7.037       | 0.110                               | 1.031       | 0.306            | 0.170                      |
| Premia from Contract Modification | MOD         | 6.155E-07   | 0.059                               | 0.756       | 0.452            | 0.033                      |
| Floor Area Ratio                  | PR          | 0.508       | 0.065                               | 0.577       | 0.565            | 0.061                      |
| Used for Industrial Purposes      | IND         | -11.012     | -0.138                              | -0.510      | 0.612            | -0.362                     |
| Land Rent                         | RENT        | 2.410E-05   | 0.043                               | 0.495       | 0.622            | -0.097                     |
| Used for Supermarket Purposes     | SUPER       | 12.590      | 0.083                               | 0.492       | 0.624            | -0.054                     |
| Used for Residential Purposes     | RESIDENTIAL | 10.016      | 0.186                               | 0.46        | 0.647            | 0.071                      |
| Used for Commerical Purposes      | OFFICE      | -9.087      | -0.152                              | -0.444      | 0.659            | 0.167                      |
| Used for Hotel Purposes           | HOTEL       | 4.770       | 0.032                               | 0.207       | 0.836            | 0.072                      |
| Located in Hong Kong Island       | HK          | 0.246       | 0.005                               | 0.041       | 0.968            | 0.073                      |
| N = 92                            |             |             |                                     |             |                  |                            |
| R square = 0.616                  |             |             |                                     |             |                  |                            |
| Adjusted R square = 0.552         |             |             |                                     |             |                  |                            |

Source: Calculated by the author using data gathered from 92 randomly selected land contracts (Table 5-2) and the SPSS statistical computer program.

other words, among all independent variables, DATE seems to be the most important variable in increasing the percentages of land-value capture.

These findings have important implications on our understanding of how the Hong Kong government employed land leasing to retain the future increases in land value. The capturing of a fairly large amount of the land-value increments was mainly due to the government's ability to lease land gradually. According to my regression analysis, the government captured higher percentages of the increased land value from land sites leased in the more recent years within the period that I selected my sample. Indeed, the variable DATE is a proxy for measuring the government's ability to capture the increased land value by regulating the timing of land disposition. The government determined the supply of land based on its projection of the demand for land for a period of five years. It then scheduled the land auctions to lease land to private developers. By regulating the supply of land, the government could influence the value of land in the market. In a real estate market where land prices were increasing rapidly, the government could retain a large portion of the surplus land value by contracting land slowly. For countries that are thinking of raising public revenues through land leasing, this result suggests that the timing of land disposition is critical.

In addition, premia obtained from lease modifications were not important in determining the percentages of land-value capture in Hong Kong for two reasons. First, leaseholders might not want to redevelop their properties because of unfavorable market conditions during my study period. They, therefore, did not modify the conditions of their leases significantly. This could then explain why the amount of premia collected from lease modifications was small. This plausible explanation does not seem to apply to the Hong Kong case. At least for the 1970s, the real estate market of this city-state grew rapidly. Based on available data, the value for land sites used for residential, commercial and retail purposes had, on average, a two-digit annual growth rate, as shown in Table 6-3.

Second, as I stated in Chapter 5, the building cycles in Hong Kong were relatively short, ranging from six to ten years (Jao, 1974, p. 251). I studied the

**Table 6-3. ANNUAL PERCENTAGE GROWTH OF LAND VALUE  
IN HONG KONG FOR LAND SITES OF VARIOUS USES**

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| Type of Land Uses | Period of analysis | Annual Percentage Growth |
|-------------------|--------------------|--------------------------|
| Residential       |                    |                          |
| Class A           | 1970-1979          | 62.5                     |
| Class B           | 1970-1979          | 17.7                     |
| Class C           | 1974-1978          | 39.6                     |
| Commercial        |                    |                          |
| Class A           | 1971-1979          | 60.3                     |
| Class B           | 1977-1978          | 25.4                     |
| Class C           | 1976-1979          | 49.4                     |
| Industrial        | 1969-1975          | 1.2                      |
| Hotel             | 1972-1978          | 9.8                      |
| Retail            | 1976-1978          | 86.8                     |

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Source: Calculated by the author using data gathered from land contracts issued between 1970 and 1979.

selected cases in my sample for lease modifications from the dates that these land were leased (mainly between 1970 and 1979) to 1991. The study period is long enough to cover, at least, one building cycle. For these reasons, I expect that some holders of selected contracts modified the conditions of their leases between 1970 and 1991.

Indeed, of the land contracts that I examined, 45 of them (about 49 percent) had been modified. For some land contracts, leaseholders modified the conditions several times between 1970 and 1991. The total number of modifications is 78. In Table 6-4, I illustrate the nature of the modifications for these contracts.

Among all these modifications, 55 percent of them were related to extensions of deadlines to fulfill the building covenants. Moreover, lessees of eleven (out of 92) land contracts that I examined had applied several times for the same extension. In the land leases, the government established a provision to specify the amount of time that lessees needed to complete the development. The purpose of this provision was to avoid speculation in the land and real estate markets. In principle, this condition would prevent land developers from deferring the development of land for the future rises in prices of residential and commercial properties. Because I did not intend originally to study land speculation under the Hong Kong leasehold, I did not collect data that would help me determine whether the lease condition is effective in controlling speculation. This is an important topic that requires thorough study in the future.

In terms of capturing land value through lease modifications, although there were many revisions of lease conditions, not all the premia collected from these modifications were of a significant amount. Only 17 out of the 78 modifications had a premium of over HK\$1 million (US\$130 thousand). It was not the lack of revision of lease conditions that led to a, relatively, smaller amount of premia being collected from lease modifications than from the initial auctions. In fact, the government did not collect much money from relaxing lease restrictions for leaseholders. Of course, the total premia from lease modifications of HK\$82 million (US\$10.5 million) is still a large sum of money. Yet, comparing the amount to premia collected from the initial

**Table 6-4. LEASE MODIFICATIONS OF SELECTED LAND CONTRACTS IN HONG KONG:  
1970 -1991**

| Lot Number | File No. | Premium           |                        |      | Nature of the Modification                        |
|------------|----------|-------------------|------------------------|------|---|
|            |          | Initial           | Modification<br>Amount | Date |   |
|            |          | (1991 HK dollars) |                        |      |   |
| IL8239     | C/S9793  | 13,153,927        | 1,999,506              | 1975 | Extending private right of way                    |
| IL8242     | C/S9782  | 2,192,321         | 49,174                 | 1973 | Extending the time to fulfill building covenants  |
| KIL9669    | C/S9776  |                   | 38,708                 | 1977 | Changing land use                                 |
| IL8223     | C/S9761  | 47,808,262        | 421,488                | 1973 | Changing infrastructure requirements              |
| "          | "        | "                 | 1,298,403              | 1976 | Changing infrastructure requirements              |
| "          | "        | "                 | 216,839                | 1987 | Changing plot ratio                               |
| "          | "        | "                 | 6,151                  | 1987 | Changing plot ratio                               |
| KIL9673    | C/S9607  | 7,126,798         | nil                    |      | Subdivision                                       |
| IL8506     | C/S11362 | 9,266,429         | 57,740                 | 1985 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 245,218                | 1985 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 208,681                | 1986 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 338,330                | 1987 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 218,376                | 1987 | Extending the time to fulfill building covenants  |
| NKIL5769   | C/S11300 | 135,375,663       | 848,489                | 1982 | Building watchman's quarters                      |
| IL8453     | C/S11244 | 116,036,283       | 1,722,048              | 1981 | Extending the time to fulfill building covenants  |
| IL8392     | C/S11242 | 1,605,168,578     | 33,772                 | 1983 | Paying premium by lump sum instead of installment |
| IL8454     | C/S11211 | 125,954,484       | 44,553                 | 1985 | Extending the time to fulfill building covenants  |
| IL8359     | C/S11202 | 307,206,059       | 4,503                  | 1983 | Building watchman's quarters                      |
| IL8413     | C/S11194 | 102,402,020       | 3,516,603              | 1981 | Extending the time to fulfill building covenants  |
| KIL10591   | C/S11178 | 5,324,905         | 38,368                 | 1981 | Deferring the premium payment                     |
| NKIL5736   | C/S11157 | 292,460,168       | 51,480                 | 1980 | Paying premium by lump sum instead of installment |
| NKIL5734   | C/S11140 | 4,096,081         | 17,160                 | 1980 | Extending the time to fulfill building covenants  |
| KIL10547   | C/S11113 | 41,780,024        | 700,130                | 1980 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 888,214                | 1981 | Extending the time to fulfill building covenants  |
| IL8429     | C/S11100 | 20,480,404        | 343,201                | 1980 | Extending the time to fulfill building covenants  |
| KIL10548   | C/S11092 | 114,280,654       | 51,480                 | 1980 | Relaxing height restriction                       |
| IL8424     | C/S11084 | 68,814,157        | 1,098,243              | 1980 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 8,918,394              | 1981 | Extending the time to fulfill building covenants  |
| IL8389     | C/S11066 | 602,123,875       | 116,036                | 1979 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 5,142                  | 1982 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 1,026,833              | 1989 | Extending walkway                                 |
| "          | "        | "                 | 66,851                 | 1989 | Administrative fee                                |
| "          | "        | "                 | 12,099,750             | 1990 | Changing plot size                                |
| "          | "        | "                 | 72,599                 | 1990 | Administrative fee                                |
| IL8425     | C/S11062 | 9,461,947         | 37,752                 | 1980 | Extending the time to fulfill building covenants  |
| KIL10474   | C/S10983 | 253,752,204       | 4,049,773              | 1980 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 11,827,427             | 1982 | Extending the time to fulfill building covenants  |
| IL8390     | C/S10974 | 516,106,178       | 1,701,865              | 1978 | Changing building design                          |
| "          | "        | "                 | 58,018                 | 1979 | Administrative fee                                |
| IL8416     | C/S10950 | 178,486,720       | 3,504,189              | 1983 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 1,170,845              | 1984 | Extending the time to fulfill building covenants  |
| IL8414     | C/S10909 | 27,888,227        | 235,940                | 1979 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 209,353                | 1980 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 209,353                | 1980 | Extending the time to fulfill building covenants  |
| NKIL5623   | C/S10801 | 20,344,691        | 4,010                  | 1984 | Building a cafeteria                              |
| IL8240-41  | C/E10804 | 37,729,937        | 393,330                | 1975 | Lot extension                                     |
| NKIL5620   | C/S10780 | 21,992,839        | 27,431                 | 1976 | Extending private right of way                    |
| IL8357     | C/S10706 | 34,699,813        | 274,619                | 1978 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 274,619                | 1978 | Extending the time to fulfill building covenants  |
| "          | "        | "                 | 137,310                | 1979 | Extending the time to fulfill building covenants  |

**Table 6-4. LEASE MODIFICATIONS OF SELECTED LAND CONTRACTS IN HONG KONG:  
1970 -1991 (Continued)**

| Lot Number | File No. | Initial<br>(1991 HK dollars) | Premium   |      | Nature of the Modification                       |
|------------|----------|------------------------------|-----------|------|--|
|            |          |                              | Amount    | Date |  |
| •          | •        | •                            | 137,310   | 1979 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 61,441    | 1978 | Increasing the number of stories                 |
| •          | •        | •                            | 58,018    | 1979 | Reducing number of car parking spaces            |
| IL8366     | C/S10700 | 48,872,976                   | 409,608   | 1978 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 193,394   | 1979 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 61,441    | 1978 | Building a 4-storey car parking spaces           |
| •          | •        | •                            | 638,200   | 1979 | Lot extension                                    |
| •          | •        | •                            | 58,018    | 1979 | Lot extension                                    |
| IL8364     | C/S10694 | 54,249,003                   | 858,668   | 1978 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 1,717,337 | 1979 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 3,747,972 | 1978 | Reducing number of car parking spaces            |
| NKIL5493   | C/S10691 | 12,218,244                   | 168,339   | 1971 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 193,394   | 1978 | Extending the time to fulfill building covenants |
| NKIL5598   | C/S10656 | 65,945,283                   | 471,881   | 1978 | Extending the time to fulfill building covenants |
| IL8358     | C/S10650 | 48,107,625                   | 382,779   | 1977 | Extending the time to fulfill building covenants |
| NKIL5566   | C/S10583 | 23,243,010                   | 184,938   | 1977 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 5,142     | 1982 | Building a canteen                               |
| NKIL5540   | C/S10547 | 24,324,080                   | nil       |      | Reducing number of car parking spaces            |
| NKIL5539   | C/S10532 | 25,945,685                   | 329,173   | 1976 | Extending the time to fulfill building covenants |
| KIL10277   | C/S10526 | 72,972,240                   | 617,198   | 1976 | Extending the time to fulfill building covenants |
| KIL10220   | C/S10419 | 97,176,321                   | 82,293    | 1976 | Changing building design                         |
| NKIL5436   | C/S10390 | 59,188,595                   | 21,621    | 1974 | Extending private right of way                   |
| •          | •        | •                            | 1,610,193 | 1976 | Extending the time to fulfill building covenants |
| •          | •        | •                            | 941,894   | 1977 | Extending the time to fulfill building covenants |
| IL8304     | C/S10343 | 57,954,553                   | nil       |      | Relaxing height restriction                      |
| NKIL5392   | C/S10334 | 38,050,969                   | 40,540    | 1974 | Reducing number of car parking spaces            |
| •          | •        | •                            | 58,540    | 1973 | Extending private right of way                   |
| IL8303     | C/S10294 | 27,513,778                   | 694,920   | 1976 | Changing land use                                |
| IL7954     | C/S10151 | 10,147,315                   | 158,348   | 1975 | Extending the time to fulfill building covenants |
| IL8287     | C/S10114 | 11,462,708                   | 7,424,100 | 1990 | Changing plot ratio                              |
| •          | •        | •                            | 72,599    | 1990 | Administrative fee                               |

Source: Gathered from the 92 randomly selected land contracts issued in the 1970s, Table 5-2.

auctions for the 92 cases (which was HK\$11.5 billion and was equivalent to US\$1.5 billion) and the average amount spent on public works annually between 1970 and 1991 (which was about HK\$14 billion and was equivalent to US\$1.8 billion), premia from lease modifications played an insignificant role in capturing the land value and financing the infrastructure expenditures in Hong Kong.

Combining my analyses of the government published data and the case studies, I find that the government recouped the increased land value mainly from the initial auctions. To explain these different outcomes of land-value capture among the mechanisms, I apply the transaction-costs concept to identify the problems associated with each mechanism. I exclude the collection of land rent, because the government has never employed this mechanism to recoup the surplus land value. Instead, it treats land rent as a symbolic payment to characterize its landlord-tenant relationship with lessees in Hong Kong. In Table 6-5, I summarize the transaction costs that the Hong Kong government faced in capturing the land value using the three mechanisms. As I discussed in Chapter 2, transaction costs are difficult to quantify. Hence, I only state whether these costs are low or high. When I mention that the transaction costs of a particular mechanism are low, I imply that the parties can reduce these costs without being involved in a prolonged controversy. When the transaction costs are high, I mean that the problems are difficult and require the involved parties to provide tremendous efforts to diminish them.

In the remainder of this chapter, I will discuss the initial auction and lease modification. I will review contract renewal in Chapter 7. Because the same factors affect the costs of maintaining government's legitimacy and integrity for all three mechanisms, I do not separate the discussion for each mechanism here. For the other transaction costs--delineation, negotiation, and enforcement costs, which are distinct among the three mechanisms, I will discuss them for each mechanism individually.

### **Costs of Maintaining Government's Legitimacy and Integrity**

The costs of preserving the Hong Kong government's legitimacy and integrity (hereafter referred to as government costs) in managing and leasing public land

**Table 6-5. TRANSACTION COSTS OF THREE MAJOR MECHANISMS OF LAND-VALUE CAPTURE**

| Mechanism            | Costs of Maintaining the Legitimacy of Government | Costs of Delineating the Parties' Rights to Benefit from Land | Costs of Negotiation | Costs of Enforcement |
|----------------------|---|---|----------------------|----------------------|
| Initial Auction      | Low   | Low   | Low                  | Low                  |
| Lease Modification   | Low   | Low   | High                 | Low                  |
| Lease Renewal:       |   |   |                      |                      |
| Renewable Leases     | Low   | High  | High                 | High                 |
| Non-renewable Leases | Low   | Low   | High                 | High                 |

Source: Compiled by the author.

seemed to be low during my study period. In fact, I found no evidence to show that the Hong Kong government was corrupt and "inefficient" in managing public land. Three factors may explain why government costs were low: (1) the British's objectives of colonizing Hong Kong, (2) the governing style of the government, and (3) the prevention of corruption.<sup>3</sup>

### **Objectives of Colonizing Hong Kong**

During its occupation of Hong Kong, the British government has focused on promoting the economic development of this city-state rather than exploiting its resources. The primary objective of the British government in governing Hong Kong is to foster economic growth and enhance its commercial interests in the colony (Lau, 1982, p. 7). The Hong Kong government has retained in Hong Kong all land revenues generated from land development and invested them primarily in public infrastructure to facilitate commercial and industrial development. Hence, the situation of Hong Kong represents a major difference from the historical development of some colonies in other parts of the world, where natives were forced to work in plantations and engage in unequal trade to provide inexpensive primary inputs for England and other parts of Europe (Bastin and Benda, 1968). To show that the Hong Kong government did not act as a rent seeker despite the fact that it owns and controls all land, I must show historically the primary objective of the British government in occupying Hong Kong.

It was during the period of rapid colonization that the British occupied Hong Kong. The primary motive was to establish a seaport so that British companies could trade with China (Lau, 1982, p. 7; Miners, 1991, p. 14). The British merchants trading in the South Coast of China wished to establish a place where they could

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<sup>3</sup> The description of the Hong Kong government is partly based on research of other scholars. Presently, I was only able to cross-check this information with primary data that are related specifically to the role of the government in land leasing. I could not ascertain the accuracy of all secondary information, because a detailed study of the general operation of the State in Hong Kong is beyond the scope of this study.

anchor and repair their ships with complete security. Besides, the British government wanted to secure a base for the British Royal Navy to protect its commercial interests in China. When the British won the First Opium War in 1842 and seized Hong Kong Island, it began to build its military force. It forced China to open its door to foreign trade and to concede the rights of British consuls to try British subjects in their own courts.

The British merchants began to invest in Hong Kong. Merchant houses, such as the Jardine Matheson, established their headquarters in the colony, and banking, insurance, and accounting services developed. In 1880, Hong Kong handled 21 percent of China's exports and 37 percent of its imports; these percentages increased to 40 and 42 percent in 1900, respectively (Haggard, 1990, p. 116). Capital was poured into the Hong Kong economy by the British merchants. Owing to the heavy British investments, the priority of the government was to protect its financial holdings by promoting the political stability and economic prosperity of this city-state. The purpose of colonizing Hong Kong was, therefore, not to expropriate resources from the colony.

After the Second World War, the Communists took over China, which created a huge influx of refugees to Hong Kong. Within days, the population of the colony increased from 600,000 to 2,360,000 (Miners, 1991, p. 34). Due to the destruction done by the war, the sudden increases in population, and the threat of invasion by the People's Republic of China (PRC), the Hong Kong government saw an urgent need for a strong industrial base to generate funds for the reconstruction of public infrastructure to accommodate the needs of the masses. This sense of urgency led the government to take a more active role than before in the provision of public housing and infrastructure. In the fifty years since the end of the Second World War, the government has provided public housing for about one-half of the population, almost three million people. It has invested in public infrastructure, such as roads, communications, port facilities, and water supply, with a high degree of financial independence from the British, the Asian Development Bank, and other foreign aid agencies.

As I argued in Chapter 5, the government generated funds to finance its infrastructure investment largely through land leasing. In some British colonies, resources and money were taken away by their colonial masters. I examined the Hong Kong government annual budget for the period from 1964 to 1991 and did not find a significant transfer of funds from Hong Kong to Britain. In regards to its policy in managing land revenues, the Hong Kong government did not seem to fit the description of a rent-seeking state. Certainly, analysts can argue that the government's provision of public housing and infrastructure was a means to maintain a supply of low-wage labor for the industrial elites or the British firms. Thus, the real purpose of its policy could have been to consolidate the political support of the elite groups in the colony. Yet, to prove whether or not this argument is true is beyond the scope of my study. What I assert here is that the government seemed to reinvest the captured land revenues in public goods in Hong Kong rather than to remit them to Britain.

### **Governing Style**

I described briefly in Chapter 2 that Hong Kong is not a democracy. Here, I provide a more detailed discussion of the Hong Kong political system. In Hong Kong, the Governor is not elected by the Hong Kong people, but he is appointed by the British government. The term of the appointment is five years and can be extended. The Governor who served the longest term--ten and a half years-- was Sir Murray MacLehose. According to the Letters Patent--part of the Hong Kong constitution, the Governor can appoint, promote, and dismiss any officials, command the army, grant Crown land to any parties, and legislate any laws according to his own judgement. If the Governor exercises his authority up to its full legal limits, he could impose his will arbitrarily on all operations of the government and completely reverse past policies (Lau, 1982, p. 27; Miners, 1991, p. 69).

There are, of course, built-in mechanisms that safeguard against such willful actions of the Governor. First, if any Governor attempted to abuse his power, he could be dismissed by the Prime Ministry of Britain. Although the British government has never dismissed a Governor before, its ability to exercise this power, certainly,

could deter any Governor from misusing his authority. Second, the Governor needs to seek cooperation from bureaucrats. The Hong Kong government is a large bureaucracy and has well-established rules and procedures for formulating and administering public policy. Although the Governor has the power to dismiss officials, the exercise of this power is not always the best strategy to motivate civil servants to carry out his decisions. Especially, newly appointed Governors need the full assistance and support of officials who have been working for the government for many years and who know the politics of "how to get things done." Finally, the Governor must take into the account the possible reactions of interest groups to and the public opinion on new policy initiatives. He will try to avoid any policy that aggravates the masses. Any public protest against its policy may invite unfavorable publicity and provoke inquiries from London on the competency of the Governor in administering the colony's affairs (Miners, 1991, pp. 69-72).

Because public opinion is an indicator of the Governor's performance, the administration is eager to seek consultation from the public. Endocatt (1964) argues that consultations are so intensive in the process of public policy making that he characterizes the governing style of Hong Kong as "governing by discussion." In major policy areas, the government has established advisory committees to gather inputs from the involved parties (Endocatt, 1964, p. 238-239; Miners, 1991, pp. 106-111). The most relevant Committee for this study are the Land and Building Advisory Committee which replaced the Special Committee on Land Production and the Building Development Advisory Committee in 1985 (Hong Kong Year Book, 1985).<sup>4</sup> The chairperson and some members of the committee are from the private sector. Most of them represent professionals and business interests in land and real estate

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<sup>4</sup> There are many other committees set up to oversee the formulation and implementation of land policy in Hong Kong. They include, for instance, the Land Development Policy Committee, Compensation Review Committee, and Valuation Committee. These committees mainly coordinate interdepartmental efforts in land policy making, and their members are mostly officials from various government departments.

development. The committee has established sub-committee to study issues related to real estate development and land supply and legislation. Government officials, including the Secretary and Assistant Secretary for the Planning, Environment, and Lands Branch, the Secretary for Economic Services, and directors of key governmental departments related to land development, are also members of this committee. The function of this committee is to advise the Governor on issues related to the public and private needs of land, land utilization, formulation of land-development programs, and regulations of planning, buildings, and the construction industry. The recommendations provided by this committee have an important bearing on land policy making in Hong Kong. It produces annual reports for the Governor to project the 5-year plans for the production and supply of land in the colony. Its suggestions will, thus, affect the supply and the leasing prices of land and the amount of lease revenues that the government can generate.

Besides, consulting the major interest groups, the government also tries to reach out to the common people. In 1968, the government established the City-District-Officer (CDO) Scheme. The purpose of creating the CDO Scheme was to institute a form of local government with which the people can communicate and associate. King (1975, p. 436) argues that the CDO Scheme has removed the information gap between the government and the people. Residents can forward their complaints about the general living conditions of their districts directly to the District Officers. These officers will, in turn, bring their grievances to the related departments. According to King (1975, p. 435), the District officers of the Kwun Tong District settled 204 out of 256 cases of grievances received in 1971. It is through these channels that the government gathers public opinion for policy making.

In addition, the government established two more channels to gather inputs from the masses--offices of the Urban Council and the Unofficial Members of the Executive and Legislative Councils of Hong Kong (UMELCO). The former is run by the elected members of the Urban Council, which is responsible for sanitation, sports, cultural activities, and urban services. The latter is set up by the government so that citizens' complaints may pass directly to the Legislative and Executive Councils for

better policy making.<sup>5</sup> According to Lau (1982, p. 152), the total number of cases brought to the attention of the office of the Urban Councils increased from 2,792 in 1968 to 10,294 in 1978, an increase of 269 percent. Although there are different interpretations of these data in terms of how "successful" these local organizations are in assimilating public opinion, these government actions indicate, at least, the government's willingness and attempt to take public preferences into consideration in formulating public policy.

The public attitude towards the government also contributes to the governing style found in Hong Kong. Before 1982, the Hong Kong people appeared almost apathetic to politics and the operation of the government. Endacott (1964, pp. 229-241), Hoadley (1973), King (1975, p. 424), Lau (1982, p. 1-17), and Miners (1991, pp. 32-40), all agree on the fact that opposition towards the State in Hong Kong was, remarkably, infrequent. Under the British rule, there were only three outbreaks of rioting. Only one of them was connected with discontent over the policy of the government.<sup>6</sup> Most people in Hong Kong seemed to be occupied exclusively with the pursuit of their own (materialistic) interests and those of their immediate family circle (Miners, 1991, p. 33). They took little interest in matters relating to government's policy. Indeed, when the government tried to organize elections for Urban Councils in 1981--the only elections of officials to manage environmental, public health, and recreational matters at the district level, the turnout rate of voters was low. Out of an estimated potential electorate of 440,000, only 34,381 (about 8 percent) registered. Among these registered voters, only 18 percent actually voted (Miners, 1991, p. 33). This political attitude of the masses gave the government considerable leeway to exercise its authority over the formulation and implementation of public policies. As

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<sup>5</sup> See Miners (1991, pp. 53-177) for a detailed discussion of the government structure in Hong Kong.

<sup>6</sup> In 1966, the government approved the proposal submitted by the Star Ferry Company that operated ferry services between the Hong Kong Island and Kowloon to raise its fare. This decision aroused public anger, and the protest resulted in a riot.

long as the Hong Kong government maintained a steady economic growth, the population would not interfere or be concerned with the ways that the government achieved this objective (Haggard, 1990, pp. 115-125, Miners, 1991, pp. 34-35). There are two possible reasons for this apathetic public attitude towards the government that are related to government costs.

The first reason is connected to the cultural heritage of Confucianism. Confucianism has long been thought to have died out in the 19th century; in fact, it has lingered on in the attitudes and behavior of people in most Asian countries. Confucian thought is less concerned than Western theory with how to structure restraints on the power of the State. It does not encourage the masses to exercise their sovereignty over the government or even over the selection of the leaders. According to the Confucian writings, the ruler should treat her/his subjects like children. A benevolent ruler would act justly and provide security for her/his subjects who, in turn, would have confidence in the ruler and obey the law willingly. If a ruler mistreats her/his people, s/he violates the "mandate of heaven." When a ruler loses her/his legitimacy, people take action to remove her/him from power. The rise and fall of so many dynasties in the history of China are illustrative.

In a 1986 survey, researchers found that 73 percent of respondents still agreed that the Hong Kong government should treat the people like parents treated their children (Lau and Kuan, 1988, p. 83). Yet, this attitude varied among age groups, with the younger generation favoring a more democratic and participatory form of decision making in public policy (Miners, 1991, p. 36). The attitude of political apathy also changed in the mid-1980s. With the forthcoming return of Hong Kong to the PRC, the people of Hong Kong are now more concerned with elections and other government operations. Political parties are more active and vocal in expressing their demands on issues related to the political structure and human rights after the PRC takes over Hong Kong in 1997. This sudden political activism is, mostly, due to the lack of confidence in the future of Hong Kong rather than the dissatisfaction with the performance of the current regime.

The second reason is related to the "meritocratic" structure of the Bureaucracy (Vogel, 1991, pp. 93-95). Bureaucrats in a Confucian society are less constrained by legal precedent. Top officials can change rules by new decrees, and local officials are, in effect, judges as well as administrators. The bureaucrats gain their legitimacy through meritocratic selection. The traditional gateway to officialdom is through examinations. In ancient China, scholars studied long and hard and had to pass local, state, and nation-wide examinations before they could serve the emperors.

In Hong Kong, examinations remain the crucial gateway to prosperity for young people. The importance of entrance examinations for gaining admission to the better schools and universities and, subsequently, to good jobs and government positions are strikingly similar to the traditional practice. This structure ensures that the most talented people are channeled to key positions in the government. Indeed, some of the ablest graduates from University of Hong Kong, the Chinese University of Hong Kong, and other colleges took jobs in the government. The government has been willing to expand the percentage of local officials in its administration. The percentage of local officers to the total number of public officials in Hong Kong increased from 2.4 percent in 1950 to 44.4 percent in 1978 (Lau, 1982, p. 53).

The government also provides its officials with a well-rounded training. Before the government assigns major responsibilities to officials, it sends them to the best universities overseas for graduate studies and to different departments to gain diverse experiences. Besides, government jobs, normally, have high security, competitive remuneration, and generous housing and other fringe benefits.<sup>7</sup>

By being staffed with some of the most talented people in Hong Kong, the government has been able to foster economic growth and provide public goods to meet the demand of the population. The administration has also been very effective in handling sudden emergencies and disasters, such as the big fire in Skek Kip Mei

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<sup>7</sup> I gathered this information from my interviews with government officials of Hong Kong. At present, I am not able to cross-check this information with published data.

(which led to the development of a massive public-housing program) and other catastrophes caused by "typhoons." In a survey conducted in 1985 by Lau and Kuan (1988), 61 percent of a total of 767 people interviewed thought that the government's performance was "good." If the government had appeared to be incompetent and corrupt, this would have provided a greater incentive for the public to press for democracy and more public participation.

These achievements of the Hong Kong government contrasted sharply with the conditions found in Mainland China during the 1970s and the 1980s. With the political upheavals, such as the Cultural Revolution, and the divergence of the living standards between Hong Kong and the PRC, the Hong Kong people believed that living under the British rule would be a better alternative than under the PRC. In their 1985 survey, Kuan and Lau (1987, p. 98) investigated the level of "trust" of the Hong Kong people placed on the governments of Hong Kong, Britain, and the PRC. They found that 84 percent of the 767 respondents trusted the Hong Kong government. On the contrary, only 53 and 42 percent of the same respondents thought that they trusted the government of Britain and the PRC, respectively. In an opinion poll taken in 1982, researchers found that 85 percent of the respondents preferred a British administration after 1997 and only 4 percent wanted Hong Kong to return to the PRC (Cheng, 1984, p. 85).<sup>8</sup> With the recognition that they would be better off by maintaining the status quo, the people of Hong Kong continued to accept the rules and policies of the government despite the absence of democracy and formal public participation in policy making. Owing to these unique relationships between the State and the civil society, the costs of maintaining the legitimacy and integrity of the government in terms of electing officials and monitoring their performance appears to be low.

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<sup>8</sup> This result was based on interviews of 998 individuals aged 20 or older. These interviews were conducted by the Survey Research Hong Kong Ltd. in 1982 (Cheng, 1984, p. 83).

### **Prevention of Corruption**

Hong Kong, like many countries, was not immune from corruption. As the economy experienced rapid economic growth during the 1970s, emerging rules and regulations created opportunities for enforcement agents to receive bribes in exchange for "convenience." It is especially true in Hong Kong where gift-giving is a tradition, and personal relationships are considered far more important than formal contracts or law in governing transactions.

During my field research in Hong Kong, I reviewed major Chinese and English newspapers, court cases, and revisions of land policy from 1970 to 1991.<sup>9</sup> I did not find a single case of corruption related to land leasing or a major land policy designed to target corruption. Instead, there were many reported cases about corrupt police officers. The government has taken important legal actions to remedy corruption in the police force. In 1971, the government legislated the Prevention of Bribery Ordinance. Under this ordinance, any government official who maintained a "disproportionate" standard of living and possessed excessive pecuniary resources without a "reasonable" explanation could be prosecuted for corruption (Kuan, 1981, p. 32). This new provision had important implications in fighting corruption, because it shifted the burden of proof from the prosecutor to the defendant. If a defendant could not provide explanations for her/his sources of income or wealth, the judge could find her/him guilty without the testimony of any witness.

Moreover, in 1974, the government established the Independent Commission Against Corruption (ICAC) to implement and enforce the ordinance aggressively (Wong, 1981). It is an independent agency that reports directly to the Governor. The ICAC has prosecuted successfully several major corrupt police officers, educated the public about their roles in anti-corruption campaign, and reduced effectively the

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<sup>9</sup> Under the library system of the Chinese University of Hong Kong, some newspaper articles are organized by subjects rather than by titles of the newspapers. Articles related to corruption are filed together regardless of the newspapers to which they belonged. I, thus, do not have an accurate count of the number of newspapers that I reviewed.

amount of corruption in the colony. From 1974--the first year of its operation--to 1976, the ICAC indicted 585 cases out of the 3,483 nonanonymous corruption-related reports (Wong, 1981, pp. 61-64). If, indeed, there was severe corruption in leasing public land, the incident would have been reported because of the aggressive actions taken by the government to fight this crime. There is, thus, no evidence to indicate that corruption was a serious problem in land leasing between 1970 and 1991.<sup>10</sup>

In fact, there was little opportunity for land officials to take bribes at the initial auctions, through lease modifications, and during lease renewals. In the 1970s, corruption was most severe in the Hong Kong Royal Police Force and the then Public Works Department (Faure, 1981, pp. 133-165; Lee, 1981, pp. 167-198). The former was responsible for upholding law and order and the latter for enforcing the Building Ordinances. Officials in the Lands Department who managed public auctions and lease renewals and modifications were not enforcement agents. In the public auctions, land developers gave bids for the land contracts openly, which did not create any major opportunity for corruption.

For lease renewals, modifications, and private treaties, if the amount of premium involved was over HK\$10,000 (equivalent to US\$1,282), land officials had to submit the proposal or application to the Valuation Committee for review. The committee was composed of the Government Land Agents, Chief Estate Surveyors of the Rating and Valuation Department, estate surveyors of the involved developers or lessees, and surveyors of the Lands Department. For a premium that was larger than HK\$40 million (US\$ 5 million), all involved officials would discuss the case in the Valuation Conference. In addition to the above-mentioned officials, senior officers from the Planning Department and Transportation Department were involved in the

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<sup>10</sup> Certainly, corruption is notoriously difficult to prove, especially when the transaction is complex and involves a huge sum of money. When two parties see the mutual benefits of exchanging payment for convenience, there is no incentive for them to disclose their illegal arrangements. Without any people stepping forward to report corruption, the government would have no case against a corrupt official. Hence, I need detailed case studies to investigate corruption in land leasing, which is beyond the scope of the study.

determination of the amount of premium and the other general conditions of the land contracts. Hence, as the monetary amount of the transaction got larger, more senior officials from various departments would be involved.<sup>11</sup> This, in turn, reduced the opportunity for corruption in land leasing. Owing to the tight internal control over the determination of land premia, corruption did not seem to be a serious problem in land leasing. As I discussed earlier, the government has maintained competitive salaries and packets of fringe benefits for civil servants, especially for senior officials. These generous remunerations reduced the temptation of taking bribes by public officials to supplement their incomes. Besides, it increased the opportunity costs of corruption; because if an official were caught, s/he would lose a secure and well-paid job.<sup>12</sup>

In sum, government costs of land-value capture under the Hong Kong leasehold system did not seem to be high during my study period. The government did not capture the land value for the benefit of the British government; instead, it used the revenues mainly to finance public infrastructure in Hong Kong. Despite the fact that the political system of Hong Kong was not democratic, the government was not totally indifferent to public opinion. Besides, the bureaucracy that is responsible for land leasing appeared to be well-organized, with tight internal control over the prevention of corruption. Although government costs were low in Hong Kong, there were other types of transaction costs of capturing land value associated with each mechanism. I discuss the initial auction next.

### **Initial Auction**

Between 1970 and 1991, the delineation, negotiation, and enforcement costs of land-value capture at the initial auction were low. The only problem that the

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<sup>11</sup> I gathered this information from personal interviews with Hong Kong government officials.

<sup>12</sup> In my interviews with officials and scholars in Hong Kong, when I asked about corruption, interviewees repeatedly provided this argument to explain how the government discouraged civil servants from taking bribes.

government encountered was challenges from industrialists and land developers concerning the limited supply of land. Because, as I argued in Chapter 5, timing of land disposition is critical for the land-value capture, the government's ability to overcome these challenges deserves attention. In this section, I first show why the above-mentioned three types of transaction costs were low. I then apply my framework to illustrate how the government defended its land-supply policy.

### **Delineation Costs**

In Hong Kong, the State owns all land; thus, it is clear who has the rights to benefit from the increased land value before the land is leased to private individuals. During my study period, the costs of delineating the parties' rights to benefit from land at the initial auctions were low. In the public auctions, the amount of premium that the government could obtain was determined by competitive bidding among land developers. Moreover, competition helped the government to decide to whom it should assign the land rights. In essence, the bidder who could pay the highest price would get the rights to develop, use, and benefit from land for a specified period of time.

### **Negotiation Costs**

The negotiation costs of allocating the land value were also low at the public auctions. The method of auctioning land rights created a competitive environment that minimized the negotiation costs. Before the auction, the government drafted the land contracts, which specified the types of land rights contained in the leases. It then distributed these contracts to all interested parties. Conditions in the land contracts were not negotiable. If the land rights specified in a land contract did not suit the need of a developer, s/he could not bid for the lease. At the public auction, if the government found that the bidding price for a parcel of land was too low, it could withdraw the land leases from the auction. Similarly, if developers thought that the bidding price was too high, they could stop competing for the land. No lengthy negotiation on the terms and the premium of the lease was required.

Certainly, this method only worked when land developers did not form a coalition in bidding for the land. In Hong Kong, with leasing prices set at billions of Hong Kong dollars, only developers with sufficient capital or financial backing from major banks could go to the auctions to bid for the land. Between 1970 and 1991, there were ten major companies dominating the real estate market in Hong Kong. Although the number of major players was small, there is no evidence to show that these developers collaborated with each other in holding down the leasing prices in the public auctions. In fact, these companies were in possession of a lot of land (Rosario, 1994, p. 62). Any decrease in the auction prices of land might reduce the value of their assets and, in turn, affect the stock prices of these companies.

#### **Enforcement Costs**

There were, normally, no enforcement costs of capturing land value by auctioning land leases. The government required the lessee to pay 10 percent of the premium as a downpayment at the closing of the auction and the rest of the payment in one lump sum within 30 days. Only in the 1970s did the government allow leaseholders to pay their premia in installments. Because of the high rate of default, the government terminated this policy in 1981. (See Chapter 4.)

In sum, the government was able to utilize a "market-like" mechanism to capture the land value at the initial auctions. Because the land rights were clearly delineated, and the negotiation and enforcement costs were low, market forces were instrumental in assisting the government to capture the land value. Although all the transaction costs appeared to be low, this situation was far from the ideal contracting environment described according to the Coase Theorem. Instead, the Hong Kong government had a better bargaining power than land developers, because it could control the land supply. Yet, this power of the government was not uncontested. In the next section, I explain how developers resisted the government's control over land, and what strategy the government used to maintain its land-supply policy.

### **Strategy of Formulating Land-Supply Policy**

Real estate developers and industrialists challenged, occasionally, the government policy of land supply. From reviewing the records of the meetings of the Legislative Council from 1970 to 1991, I found that some members of the Council constantly requested the government to release more land for industrial development. They asserted that restrictions on the supply of land would increase production and housing costs in Hong Kong. These effects would, in turn, draw businesses away from Hong Kong and impose financial hardships on the public in locating affordable housing. In order to examine how the interplay of the government's and the lessees' strategies shaped the reformulation of rules for releasing land, I apply the framework that I developed in Chapter 3.

Possessing the ownership of land did not enable the government to coerce the business communities into accepting its control over land supply. The government realized that it needed the private sector to invest capital in land. Terminating the contractual relationships with the private sector would only reduce the possibility of generating public funds from land leasing. It would, therefore, be unwise for the government to disregard the discontent of industrialists over its land-supply policy.

Unable to dismiss complaints from the lessees, the government was left with the option of persuasion. To convince the public and the discontented parties that their concerns were taken into consideration and that the design of the land policy was based on the general benefits of all Hong Kong people, the government took three actions. First, the government established the Special Committee on Land Production to study issues related to the production and the supply of land in 1977. I discussed the functions of this committee earlier and will not repeat them here. In short, members of this committee collected inputs from both the public and private sectors and recommended to the Governor on the timing of land supply. This committee, in turn, created the opportunities for the private sector and the government to reconcile their differences on the land-supply issues.

The second action of the government was to grant most industrial land to private individuals by private treaties, rather than by auction, between the 1960s and

the 1970s. As I mentioned in Chapter 4, in the private treaties, the parties determined the premia for leasing land through negotiations rather than competitive bidding in public auctions. Without other competitors bidding up the lease price, land premia for industrial land could be lower than land sites for residential and commercial uses. With this special treatment for industrialists to satisfy their needs for land, the government tried to gain their support for its land policy.

Finally, the government took major steps to persuade the general public that its land policy worked for their best interest. The government used land revenues to finance public housing and other infrastructure. By satisfying the demand for housing and basic infrastructure of the population, the government's policy of land supply gained its validity.

For the developers who opposed the land-supply restrictions, they did not have the power to force the government to release more land, because the State owned the land. Exit would not be an option, because they could not find other suppliers that could provide less expensive land in the colony. Moreover, the Hong Kong economy continued to grow, even though the government remained strict on its land supply. Developers, thus, could not convince the majority of the public that the restrictions on land supply had severe and direct ramifications on their livelihood. Unable to generate enough support to resist the government's land-supply policy, the private sector had to work within the constraints imposed by the government. The government could, thus, regulate the land supply and, in turn, had the ability to capture the increases in land value.

Apparently, the ability of the government to control land supply did not depend solely upon its ownership of land and the use of coercion. If the government had not used persuasion to gain support from the public by investing the land revenues wisely in public goods, the masses who did not benefit from the land policy might, eventually, have challenged its validity. Hence, it was the use of persuasion that engendered the power of the Hong Kong government to control land supply and, in turn, allowed it to exercise this power to recoup the land value. This is important for policy makers who are experimenting with leasehold systems, because the legal power

of owning land does not guarantee the possibility of capturing the land value. Instead, they should also focus on the use of persuasion to establish legitimacy of their control over land. As the Hong Kong case indicates, the allocation of land revenues to benefit a large segment of society was an effective action to persuade the public of the legitimacy of the government's land policy.

### **Lease Modification**

For property redevelopment or improvements, lessees need to apply to the government for modifying the conditions of their land leases if they requires land rights that are not specified in the contracts. There are, broadly defined, two types of lease modifications. The first is the "minor" revisions of lease conditions, which require little negotiation. As I mentioned in Chapter 4, the government has established standardized procedures and formulas to calculate premia for these modifications, such as extending the time to fulfill the building covenants specified in the leases, reducing parking spaces, and removing restrictions on industrial land uses.

The second is the "major" revisions. For instance, when redevelopment requires the combination of two land lots, lessees must surrender the old leases to the government for an exchange of a new contract and pay an additional premium. Because the government will issue a new contract, the relevant parties must negotiate on the terms and the premium of the lease. This type of lease modification is most complex. Another form of major modification, which does not require the issue of a new land contract, is the removal of height restriction. The methods of assessing the premia for these lease modifications is provided in Chapter 4.

### **Delineation Costs**

Delineation costs for the two types of lease modifications were low during my study period. The additional premia paid for lease modifications were for the acquisition of the new development rights that were not contained in the initial land contracts. The State owned these unassigned development rights; thus, the parties should have had no problem of defining who had the right to benefit from these

development rights. Although it was clear that the government owned the land rights, its ability to capture the increased land value was hindered by the costs of negotiation involved in lease modifications.

### **Negotiation Costs**

Negotiation costs of minor lease modifications were low, because officials could just set the premia based upon an established formula.<sup>13</sup> For major lease modifications, the government and developers might disagree on the amount of premium due to their different estimates of: (1) the land value before and after modification, (2) the construction costs, and (3) the discount rate used to calculate the interest cost of investment capital during the construction period. These were the issues that the parties needed to settle in their negotiations.

Despite the fact that disagreements emerged, the parties adopted some standardized techniques to estimate the required premium for changing lease conditions in Hong Kong. There was a well-established group of professionals, called estate surveyors, who assisted the parties in reducing the costs of negotiating premia for lease modifications. Two major organizations oversaw and licensed the practice of estate surveying in Hong Kong--the Hong Kong Institute of Surveyors (HKIS) and the Royal Institute of Chartered Surveyors, Hong Kong Branch (RICS). Among various services provided by different types of estate surveyors, the "general-practice" surveyors rendered advise for negotiation on lease modifications and renewals. Some surveyors represented private developers, and some worked for the government. Most of the key officials in the Land Departments were estate surveyors and members of the HKIS and the RICS. Because the number of members of the two organizations was small, surveyors who worked for the government knew those practicing in the private

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<sup>13</sup> Certainly, there are other types of negotiation costs, such as obtaining the approvals from the Buildings Department, the Transport Department, and the Town Planning Board. Although these negotiation outcomes would affect the amount of premium paid to the government, they are costs related to redevelopment and not to land-value capture. Hence, I do not discuss them here.

sector very well.<sup>14</sup> Some surveyors worked for the government for several years and then entered into private practice. All these surveyors learned the same techniques of estimating premia in their training and went through several rigorous qualifying examinations to become members of the profession.

Owing to these professional standards and personal acquaintance between the public and the private surveyors, they could communicate effectively with each other using the same technical terms. In my interviews with the public and private estate surveyors, they admitted that this mutual intelligibility helped them to convey effectively to each other the rationale behind their assessments of premia for contract modifications. With some common understanding of how premia should be determined, persuasion became a viable option to influence the outcome of negotiation and to reduce the chance of resolving conflicts through court ordering. A developer with whom I interviewed indicated that he normally started the negotiation with the government informally before he submitted the application for lease modifications. Through personal communications, he might be able to influence the perception or judgement of the government's estate surveyors on their calculation of the premium. This, in turn, might affect the amount of money that he needed to pay to the government.

In fact, the major negotiation problem in redevelopment was not due to the bargaining between the government and developers. Instead, negotiations between developers and lessees or tenants involved in the acquisition of the land rights were most problematic. These negotiation costs were associated with the transfer of land rights and not with the determination of modification premium. Yet, these costs had directly impeded the ability of the government to capture the land value through lease modifications.

A developer who did not hold the lease of the land for redevelopment had to purchase the land rights from the existing lessees. In Hong Kong, most of the domestic residents live in multi-storey buildings. In this type of building, an owner of

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<sup>14</sup> At present, the HKIS has about 1,200 members and the RICS has about 1,400.

an individual unit is considered to be a sublessee of the land lease. In my study, between 1970 and 1991, I found that when the government did not assign and divide land rights and obligations of the sublessees explicitly, the land lease had undivided holdings. Hong Kong developers knew that negotiations involving a large number of sublessees could be costly and time-consuming.<sup>15</sup> In the negotiations, leaseholders could refuse the offer of the developers. There was no rule that required individual leaseholders to observe the majority decision. Individual lessees could withdraw from the agreement and hold up the entire redevelopment project.

The developers then had to bargain with non-cooperative parties individually. If the number of uncompromising parties were large, negotiation costs in terms of time and effort could be very high. When the negotiation costs were so high that it became more expensive to get land by purchasing land rights from existing lessees than leasing land at the public auctions, developers might give up the redevelopment projects.

I know a case where a developer wanted to redevelop a six-storey, pre-war building in North Point. Foreseeing that North Point would be a fast-growing residential and retail district, the developer decided to purchase the existing property and redevelop it into a 20-storey apartment building. The first problem that the developer faced was to negotiate with each existing tenant in the building for purchasing their apartments and land rights. One of the 12 tenants living in the building refused the offer from the developer and demanded a higher price. Because of this refusal, the whole project was held up. Without resolving the problem of buying the property and the land rights from one existing leaseholder, the developer was unable to apply to the government for relaxing the height restrictions and redeveloping the leased land. Hong Kong developers with whom I talked admitted that negotiations with the lessees on the selling price of their leased rights and with existing tenants on their compensations for relocation were very complex. For them, these negotiation costs were the major deterrence to initiating redevelopment projects.

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<sup>15</sup> I gathered this information from personal interviews with Hong Kong developers.

### **Enforcement Costs**

Finally, the costs of enforcing the payment of premia for lease modification were low. The government would not grant permits for construction if developers did not pay the premium in full. In this way, the government bore almost no risk of default by developers if the redevelopment project failed. In sum, all four types of transaction costs of land-value capture through contract modifications were low, except the costs of negotiation. The government has tried to exercise its legislative power to devise rules to minimize the negotiation costs. I discuss these efforts in the next section.

### **Intractable Negotiation Costs for Lease Modification**

From the standpoint of the government, the negotiation problem between developers and lessees in land redevelopment impeded its ability to recoup the increased land value through contract modifications. Urban land that was leased for low-density residential purposes in the past would have a much higher value for, say, commercial uses today. Unable to demolish the out-dated structures and redevelop the land, the government could not allocate land to its most profitable economic uses and benefit from the potential financial gains. The government, therefore, had an incentive to minimize these negotiation costs.

Currently, the government does not seem to be able to solve the problem by exercising its legislative power. These issues of urban redevelopment under the leasehold system in Hong Kong is an important subject that warrants a thorough study in the future. This topic, however, is beyond the scope of this study. Yet, the issue is related closely to land-value capture; I, therefore, describe briefly how the government tried to minimize these costs.

The government established the Urban Renewal Pilot Scheme between 1969 and 1983 and formed the Land Development Corporation in 1983 (Bristow, 1984, pp. 218-242). In the Urban Renewal Pilot Scheme, the government designated the Urban Renewal Districts where it demolished the older traditional Chinese settlements and squatters and repossessed the land for redevelopment. Using its legislative power, the government established the Crown Lands Resumption Ordinance to deal with matters

related to compensating the dispossessed property owners and displaced tenants. The government then assembled the land, constructed the required public infrastructure, and leased the land to private developers for redevelopment.

The implementation of these government schemes was not without problems and criticisms. Although the Crown Land Resumption Ordinance might assist the government to repossess and assemble land for urban redevelopment, the repossession of land had to be for "public purposes" only. Besides, the government needed to compensate the lessees or the existing tenants when it took land. The negotiations on the amount of compensation between the government and other related parties also generated high negotiation costs. Unable to rely totally on its legislative power, the government created the Land Development Corporation to assist the negotiations between developers and the lessees on the transfers of land rights. To persuade every lessee to give up her/his land rights took a long time. Employing persuasion was, normally, not practical if the project was to be implemented with a relatively short time frame (Townland Consultants Ltd., 1991, p. 7).

The strategy of exit used by the lessees to hold up the negotiation increased the negotiation costs. The availability of land from the public auctions also allowed the developers to employ exit to get land for development from the government rather than through existing lessees. Consequently, the strategy of exit made profitable land transactions untenable. Without the cooperation of the existing lessees, developers could not assemble land and apply for lease modifications. This explains why the premia collected from lease modifications were insignificant in my contract-based case studies between 1970 and 1991.

### Conclusions

In this chapter, I review outcomes of land-value capture under the four mechanisms. Of these mechanisms, the Hong Kong government relied mainly on the collection of premia from the initial auctions to recoup the land value. Based on the data gathered from my contract-based case studies and government publications, I found that a major portion of the lease revenues was from the initial auctions. Premia

from lease modifications accounted for only a small percentage. Although lessees had modified their leases, these modifications were minor. Lessees paid, relatively, much less money to revise their lease conditions than to lease land in the auctions. I argue that this outcome was because of the nature of transaction costs associated with the two mechanisms.

The costs of maintaining the government's legitimacy and integrity in capturing the land value through land leasing did not seem to be high for all mechanisms, in general, and for the initial auctions, in particular. The costs of delineating, negotiating, and enforcing the parties' right to benefit from land for the initial auctions were also low, because land rights were fairly well-defined at this initial stage of land contracting. More importantly, the Hong Kong case shows that it was not the proclamation of state ownership of land that allowed the government to control land supply and, in turn, recoup the land value. Instead, legitimacy of ownership was derived from persuasive actions. By allocating the revenues to meet the demands for housing and infrastructure of the masses, the government gained its legitimacy of regulating land supply and of using land as a source of revenues. These factors explain why the government could generate most of the lease revenues by auctioning public land.

For lease modification, among all four types of transaction costs, only the negotiation costs associated with the transfers of land rights from the relevant lessees to developers were high. Even if private developers were willing to pay an additional premium to modify lease conditions for redevelopment, difficulties in assembling land discouraged them from engaging in such an undertaking. This illustrates why I did not find any major modifications on lease conditions in my contract-based case studies.

Although the government tried to minimize these negotiation costs by exercising its legislative power, its actions did not seem to reduce the negotiation costs. Developers who found that negotiations with lessees were too costly turned to the public auctions to obtain land for real estate development. Lessees who tried to negotiate for a better price for their land rights employed exit as their strategy to hold

up the project. Unable to eliminate the option of exit for both parties, the government was not able to utilize the opportunity during lease modifications to capture the increased land value.

## CHAPTER 7

### CAPTURING LAND VALUE DURING LEASE RENEWALS

In Chapter 6, I discussed the initial auctions and lease modifications. The purpose here is to examine the transaction costs associated with the land-value capture during lease renewals. In principle, the government can demand an additional payment from leaseholders when they extend their expiring leases. The government should have no problem in doing that, because there is a contractual agreement between the government and leaseholders that the granting of the development rights is only for a specific period. When the contracts expire, lessees must return the land rights to the government. If lessees do not agree to pay the premium for extending their leases, the government can take back the land.

In this chapter, I examine this proposition by studying two incident-case studies. My first case concerns a prolonged controversy that occurred between 1968 and 1973 over the reassessment of land rent when leaseholders renewed their leases. I call it the "land-rent controversy." The dispute over how the level of rent should be determined triggered a series of incidents that finally led to major government concessions.

For my second case, I reviewed the government policy in granting new leases to holders of nonrenewable leases when these land contracts expired. (See Chapter 4 for the distinction between renewable and nonrenewable leases.) Historically, the government compromised on demanding premia at the full market value for issuing new contracts to nonrenewable leaseholders. To examine these two cases, I identify the transaction costs of the two types of lease renewal and then apply the framework to study how the involved parties minimize these costs.

#### **Land-Rent Controversy in Extending Renewable Leases**

The issuing of the renewable land leases began in 1899. As I have described in Chapter 4, the then Secretary of State in Britain, Mr. Joseph Chamberlain, instructed the Hong Kong government not to grant any more 999-year leases. Instead, the term of the leases was to be 75 years. There were strong protests from the

Chamber of Commerce and from the public over his decision. In view of the public protests, he instructed the Colonial Secretary to grant the right of renewal to leaseholders when their 75-year leases expired. Under this provision, leaseholders could renew their leases for a term of another 75 years with a reassessment of the land rent conducted by the Director of Public Works. Leaseholders did not have to pay additional premia or fines to renew their expiring leases (Scholes, 1967, pp. 282; Hong Kong Hansard, 1973). In Chapter 6, I showed that the costs of maintaining government's legitimacy and integrity of land leasing in Hong Kong were low. I also stated that the reasons are applicable to all mechanisms; thus, I will not repeat the discussion here.

### **Delineation Costs**

The delineation of the right to benefit from land during lease renewals was complicated. Once the government leased the development rights of land to other individuals, it became unclear what portion of the increased land value belonged to the State, and what portion belonged to the lessees. As I have argued repeatedly, only in theory can the contracting parties specify in advance how to divide the land-value increments in the land contracts. When information is imperfect, and contingencies are unaccounted for, the parties must renegotiate to settle any dispute over the initial agreements on the allocation of land value.

In the 1970s, the government and the lessees disagreed on how to divide the increased land value during lease renewals. Despite the fact that they drew up an agreement in their initial contracts that the government would set a new land rent for renewal based on the full market value of the land, the unexpected large rises in land value made this agreement unenforceable. Lessees believed that they purchased the right to renew and, thus, should not pay a high land rent to continue their uses of the land. The government thought that it should set a new level of rent according to the rule specified in the land contracts. This disagreement created tremendous costs for both the government and the lessees to renew their land contracts.

The land-rent controversy erupted in 1967 concerning a land site in Tsim Sha Tsui--a major commercial and tourist area in Kowloon. Mr. Chang Lan Sheng, the leaseholder of a lot, wanted to exercise the right to renew his renewable lease. The government and Mr. Chang, however, disagreed on what a fair and reasonable rent should be. The dispute was further intensified by the large difference in rent that Mr. Chang had to pay before and after the renewal of his lease. The original land rent before the renewal was only HK\$76. The rent increased to HK\$60,764 (approximately 800 times) after Mr. Chang renewed his lease (Scholes, 1967, p. 282; Wu, 1973, p. 4).

The huge difference between the original and the new rent level was, in part, due to the rapid increases in land value. The value of the land had increased many times due to multiple factors, such as leaseholders' investments, the government's provision of public facilities and infrastructure, general increases in the demand for land, and possibly a restricted land supply. These changes in the land value altered the perception of the contracting parties' entitlement to this increased land value and, thus, their expectations of their share of the future stream of income from land development. There was no channel or opportunity for the concerned parties to express their realization of these changes and reconcile any differences. As stipulated in the land leases, the government would not exercise its right to obtain a certain portion of the increased land value by reassessing the land rent until the renewable leases expired and were renewed. As the discrepancy between the government's and Mr. Chang's expectations on each other's rights to retain the increased land value grew wider, the dispute over the distribution of this land value intensified.

Considering that the total amount of the new rent was equivalent to a premium, Mr. Chang sued the government for breaching the conditions of his lease. In 1967, the case, *Chang Lan Sheng vs. Attorney General*, appeared before the local appeals court. Judge Scholes (1967, pp. 282-314) found that the provision of the renewable leases did not empower the government to charge the full market value of the land as new rent. Judge Scholes, therefore, decided that the government had violated the lease conditions by calculating the new rent based on the full market value of the land.

The government appealed to the full court in 1968, with Judges Rigby, Blair-Kerr, and Huggins deciding on the case. These three judges reversed the decision made by Judge Scholes and decided that the rent fixed by the Director of Public Works was fair and reasonable (Huggins, 1968, pp.487-499). Mr. Chang appealed to the Privy Council in London; however, his appeal was denied (Wu, 1973, p. 5).

Winning these series of court battles, the government thought that it had the legitimate power to set rent for lease renewal according to its formula. It issued a consolidated statement in 1969 to clarify the methods of fixing the rents for the renewed leases (Sing Tao Morning Post, 1969). It confirmed that the new rent for extending the renewable leases would be calculated based upon the full market value of the land amortized at 5 percent over the term of the leases. It would then add the "Zone Crown Rent" to the amortized figure to derive the annual rent payment. (I will define Zone Crown Rent later.)

The courts' ruling, however, did not settle the dispute between the government and the lessees over the level of new land rent for contract renewals. Leaseholders who tried to renew their leases after Mr. Chang's case challenged the government's rights through political channels. Their actions, eventually, made the courts' decisions unenforceable. I will discuss these actions in detail when I examine the resolution of the land-rent controversy later in this chapter.

### **Negotiation Costs**

The negotiation costs of capturing the land value during the extension of the renewable leases were high. These high costs were mainly due to the difficulties of drafting land contracts that could account for all contingencies and contain explicit provisions on how to deal with unexpected circumstances when they arose. In the land-rent controversy, lessees argued that the wording of the lease-renewal provision in their leases was vague. They said that the government had misled them. They did not expect to pay such a high level of rent after they renewed their leases. I interviewed some real estate developers who were active in the protests at that time. Some of them claimed that, based on the terms of the land contracts, they never expected to

pay land rent several hundred times more than the original amount to renew their leases.

There were two major ambiguities in the wording of the provision in governing the renewal of the renewable leases. First, it was unclear about what constituted a "fair" and "reasonable" rent and, second, how to differentiate a "fine" from a "premium" (Scholes, 1967, pp. 289-296; Hong Kong Hansard, 1973). Before elaborating on what was a reasonable rent, I have to explain the two types of rent that the government established at the time of the controversy--the "Zone Crown Rent" and the "reassessed" rent. The Zone Crown Rent was the rent set for a specific district (or zone), which was used by the government for establishing new leases. In other words, rent for leased land within a particular district would be the same. In granting land leases, the government normally collected premia from lessees for obtaining the development rights to the leased land. In addition to the premia, the government also collected a small amount of Zone Crown Rent annually from leaseholders that usually was not related to the market value of the land. Moreover, the government did not adjust the Zone Crown Rent to reflect the current market value of the land in the district. The reason for collecting only a small amount of rent was that lessees had already paid the land premia; therefore, lessees should not pay a high rent for the leased land.

To reassess an annual rent for the renewed leases, the government employed a different formula to calculate the new amount of rent that lessees needed to pay. Part of the reassessed rent was calculated based on the full market value of the land amortized at 5 percent over the term of the renewed leases (normally 75 years). The government then added the Zone Crown Rent to the calculated yearly payment to derive the total annual rent for the renewed lease. I call this the reassessed rent. From the government's point of view, it was the latter method that the Director of Public Works should use to calculate the rent for extending the renewable leases. The government believed that it would be fair and reasonable to calculate the reassessed rent based on the full market value of land. Conversely, leaseholders asserted that they should only pay the Zone Crown Rent, based on two reasons.

The first is that because they had already paid for the right to renew their leases when the contracts were first established, it would be unfair for them to pay for the option again. The second reason was related to the other major ambiguity of the provision, namely the definition of a "fine" and a "premium." Leaseholders argued that the reassessed rent for their renewable leases was equivalent to a premium. At that time, leaseholders of new leases were given the option to pay their premia in installments over 21 years. Because the government calculated the reassessed rent based on the amortization of the full market value of the land, the rental payment was very similar to the annual premium installments. The only difference was that the number of annual payments (normally 75 installments) was larger for the renewed leases than for the newly established leases. Because the government had specified explicitly in the land contracts that leaseholders would not have to pay any fine or premium for renewing their leases, the government would breach the lease condition if the new rental payment was, indeed, a "disguised" premium.

These ambiguities surfaced when the parties tried to apply the contractual agreements to allocate the unanticipated rapid increases in land value. Because the contracts were "incomplete"--meaning that the provisions did not anticipate the rapid increases in land value, the parties disagreed with each other on the original rules for the allocation of land value and had to renegotiate to resolve their differences. The dispute was not over whether the government should share with leaseholders some portion of the increased land value in the form of land rent; the issue, instead, was about what was the appropriate amount. Although both parties recognized each other rights to enjoy the benefits from land development, they did not know how to delineate these rights. When negotiations broke down, disagreements led to political confrontation.

### **Enforcement Costs**

In 1973, the government faced great difficulties in enforcing the lease conditions for determining the land rent for lease renewals. The government's perception that it could set land rent according to its formula led to political

confrontations between the government and leaseholders. The conflict involved many leaseholders and organized industrial and business associations. There were about 5,000 leases up for renewal at approximately the same time (Hong Kong Hansard, 1973; Yeh, 1994, p. 5). Leaseholders of the expiring leases were horrified to find that the new amount of rent for their renewed leases would be several hundred times more than they paid currently. They began to organize and criticize the government policy on the determination of the new rent for lease renewal. As I just discussed, there were ambiguities in the wordings of the contractual agreements on rent determination. Negotiations involved in settling disagreements between the government and lessees were difficult. Besides, because so many leases were up for renewal at that time, the government did not have the capacity to negotiate and settle disputes over land rent with these lessees individually. Due to these factors, the government encountered high costs in enforcing the contract conditions for determining the land rent.

Owing to these high transaction costs, the involved parties had to renegotiate and devise new rules for allocating the increased land value during lease renewals. In the next section, I apply my framework to examine the strategies that the parties used to shape the outcomes.

### **Resolution of the Land-Rent Controversy**

Although the government won the legal battles in 1967 and 1968, the court rulings did not conclude the issue of determining land rent for the subsequent lease renewals. When the number of renewable leases up for extension increased to about 5,000 during that period, more leaseholders were affected and unsatisfied with the government's policy of calculating the reassessed land rent. The affected leaseholders began to challenge the government policy.

During several months of agitation, the attitudes of the government had been that of indifference to the complaints of the public. Two factors contributed to this government attitude. First, the government believed that its actions were absolutely legitimate. When the contracting parties first established the land contracts, both agreed that the Director of Public Works would determine a fair and reasonable rent

for lease extension. Second, this rule was affirmed by the decisions of the courts. The government thought that it had the legal power to coerce the lessees to accept the terms of the contracts.

Owing to these two reasons, the government did not employ the strategy of persuasion to convince the lessees to comply with the established agreements. It also did not see the need to negotiate with the leaseholders for any adjustment of the reassessed land rent. It is true that if both the government and lessees did not agree on the level of rent for renewal, they could terminate their leases. Exit, however, was not an option, because there was a provision in the land contracts that allowed the lessees to renew their leases for another 75 years. Most lessees thought that they had paid for the right to renew and wanted to exercise this right. This situation led the government to think that the most appropriate strategy to deal with the confrontation was to maintain a firm position and exercise its legal power to set the land rent for lease renewal at the full market value.

In view of this unyielding position of the State, some business groups began to organize themselves to resist the government's lease renewal policy. Because the government won the case against Mr. Chang Lan Sheng in the dispute over the determination of land rent, the lessees knew that it would be difficult to challenge the government by appealing to the courts. Instead, they organized public protests (voice). In order to generate support, they first used persuasion to enlist the public and business organizations to join them to voice their grievances.

The Chinese Manufacturers' Association (CMA), an active opponent to the government, organized a meeting at the City Hall Garden Restaurant. Representatives from 247 associations attended. These associations included, for example, the Chinese General Chamber of Commerce, Council of Hong Kong and Kowloon Kai Fong Association, and the Real Estate Association. All were well-respected groups and influential in public policy making related to economic development and land. At the meeting, the CMA convinced these business groups that the lease-renewal policy would, inevitably, increase the costs of doing business in Hong Kong. If the Crown rent increased by several hundred percent, high rental costs would hurt the profitability

of their business. Representatives of 247 associations signed a petition, which was later sent to the Governor (Wu, 1973, pp. 7-9).

To gain more support from a wide spectrum of the Hong Kong society, the CMA extended its persuasion strategy. It brought its case to the public by means of press releases, mass meetings, and letters to various officials. With additional public attention, two important groups also joined the protest, namely the Federation of the Hong Kong Industrialists (FHKI) and the Hong Kong General Chamber of Commerce (HKGCC). Both groups were headed by "Unofficial" members of the Hong Kong Legislative Council--Mr. Tse-Kai Ann and Mr. Gerald M. B. Salmon.<sup>1</sup> Ann (Hong Kong Legislative Council, 1972, pp. 742-743) reported that the FHKI and HKGCC conducted a study jointly in which they revealed the potential and expected burden imposed on manufacturers by the government policy. He threatened that this financial hardship would lead to insolvency, unemployment, labor disputes, and even social unrest. Salmon (Hong Kong Legislative Council, 1972, pp. 744-751) argued that the government should not rely on the decisions of the Privy Council to justify its policy. The rulings were based only upon one case. Instead, the government should consider the impacts of its policy on all segments of society, especially owners of small factories, tenants, and small property owners. He asserted that these were the people who would be hurt the most if the government charged a high rent.

With these two unofficial members challenging the government openly in the Legislative Council, other unofficial members, such as Dr. Sze-Yeun Chung, Oswald Cheung, Pak-Chuen Woo, and Wai Szeto, who had remained silent before began to join the protest. The arguments that the CMA and its allies made in the press and mass meetings were presented in the Legislative Council meetings by these unofficial members, details of which are given in the Official Report of Proceedings of the Hong Kong Legislative Council (Hong Kong Legislative Council, 1972). According to

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<sup>1</sup> Unofficial members of the Legislative Council are appointees of the Governor to the council who are not civil servants. They could be members of some professions, trade unions, or social organizations.

Miner (1991, p. 146), it was a rare occasion that all unofficial members of the Legislative Council opposed a policy of the government. Although these unofficial members knew that the Governor could ignore objections from the unofficial members, they still decided not to support any bill related to the reassessment of renewed rent. The debate on the issue continued for two weeks. These unofficial members successively rejected a series of government proposals.

Their use of persuasion, finally, generated enough support, and the lessees began to utilize voice to challenge the government directly. The CMA and its allies decided to voice their discontent to the government by also threatening the possible exit of some industries. The CMA sent a letter with the petition to the Governor signed by all the participating associations. In the letter, the CMA argued that because industrialists were facing problems of rising costs in production, a further increase in land rent would force them to relocate to other Asian countries. This would definitely slow the industrial development of the colony (Sing Tao Morning News, 1971a, 1971b). The CMA also threatened that there would be a possibility of social unrest if the government was unwilling to compromise. Besides, an unofficial member of the Legislative Council, Dr. Chung, reported that if the land rent were to increase by 200 to 1,500 times, the Exchange Bank Association would expect a rapid increase in the number of defaults. To protect their shareholders and depositors, banks might have to recall their bank loans and disrupt the economic prosperity of Hong Kong (Hong Kong Legislative Council, 1972).

The public pressure and the opposition of the unofficial members of the Legislative Council severely undermined the government's strategy of using coercion to set rent for lease renewals according to the rules specified in land contracts. Reluctant to disturb the economic and political stability of the colony, the government announced its first concession, consisting of four parts. First, there would be a reduction of the overall reassessed rent by 20 percent. Second, leaseholders would have to pay only 50 percent of the reduced rent in the first year, and another 10 percent would be added to the payment in each subsequent year until the full amount of the reduced rent was paid. Third, the government would use an interest rate of 4

percent instead of 5 percent to amortize the full market value of land. With a lower interest rate, the amortized annual payment would be less. Fourth, leases subjected to rent control would be renewed without any increase in land rent (Hong Kong Annual Yearbook, 1972; Hong Kong Legislative Council, 1972, p. 782).

Although the government considered its concession to be very generous, the CMA and its allies were still dissatisfied with the modifications. After debating intensively on the appropriate charge in meetings of the Legislative Council, the government was finally persuaded to set the reassessed rent at 3 percent of the rental value of the renewed property. Members of the Legislative Council approved the government proposal and passed the bill into law. The 1972 Crown Lease Ordinance took effect on December 14, 1973. The public protest subsided.

In this case, although judges of the Privy Council and local courts decided that the government had the legal right to set the reassessed rent, their rulings did not seem to determine the outcome of the controversy. There were strong social and political forces that went against these legal decisions. To some extent, this case shows that conflict resolution for land contracting in Hong Kong did not rely solely on the legal institutions. Instead, the outcome was dependent upon the strategies used by the involved parties.

The lessees were able to employ persuasion to convince and recruit members of various segments of society to join their protests. When the organizers convinced the major portion of the public and business organizations that the policy of lease renewal would have significant negative impacts on their livelihood, they gained tremendous strength in resisting the coercion of the government through voice. The resistance of the protestors was reinforced by the threat to exit by some businesses. Although the political system of Hong Kong was hardly democratic, the government was extremely sensitive to public opinion (Miners, 1991, p. 206). There had been bad experiences of public outcry that led to social unrest. These crises made bad publicity for the colony, frightened foreign investors, and led to unwelcome ministerial and parliamentary concerns from London on the colony's affairs. The danger of any similar outburst was a strong reason to avoid antagonizing the public. The ability of

the lessees to use persuasion, voice, and exit effectively allowed them to resist the government and revise the rules of calculating land rent for extending the renewable leases.

The new rule of determining land rent, which was set at 3 percent of the rental value of the property, would reduce the costs of negotiation and enforcement, provided that the government could maintain a generally agreed-upon and updated assessment of the rental values of properties in Hong Kong. If there was no disagreement between the government and the lessees on the rental value of the involved property, rent for lease renewal would be just 3 percent of the estimated value. No lengthy negotiation would be needed.

In fact, the Rating and Valuation Department of Hong Kong maintains updated estimates of the rental values of properties in Hong Kong. It publishes its assessments, categorized by locations and types of building, annually. Whenever there is a general reassessment of rental values, it announces its results. Whenever there is a dispute on the assessment of the rental values for a property, the government may recalculate its estimate. This process continues for three months. After that, the resulting estimates are used to determine the reassessed land rent, rates, and other valuation purposes. Calculating reassessed land rent based on 3 percent of the rental value of property lowers the chance of disagreements between the government and the lessees and, thus, minimizes transaction costs. Moreover, this rule is simple and, hence, easier to enforce.

The resolution of the land-rent controversy indicates that the legal system may not always play an important role in minimizing transaction costs. This outcome affirms the argument of some New-Institutional-Economic scholars, which I discussed in detail in Chapter 2. Again, similar to the situation of capturing land value at the initial auctions, ownership of land does not guarantee that the State can capture the land value. The attempt by the Hong Kong government to recoup the land value during lease renewals was not successful, given the concessions that it made. Thus, when the government tries to capture the land value, it must examine how the lessees will react to its action, and what strategies they may employ to counter the policy.

For the Hong Kong case, a better understanding of these dynamics might have led the government to choose persuasion as a strategy to deal with the public protests, which may have reduced the level of confrontation. In the case of the regrant of the nonrenewable leases, I will show how a different context and transaction costs led the parties to use a distinct set of strategies to devise rules to minimize costs of capturing the land value.

### **Regrant of Nonrenewable Leases**

When nonrenewable leases expired, leaseholders did not have the right to renew their leases. To continue the existing contractual agreements on their rights to use and develop land, they had to apply for new contracts. In Hong Kong, this procedure is called the regrant of nonrenewable leases. Analysts would expect that the possibility of demanding payments from leaseholders for regranting the nonrenewable leases would be relatively easier than for extending the renewable leases, mainly because, legally, the government and lessees had agreed that the land rights were granted for only a specified time. When leases expired, the land rights along with all improvements would revert to the government (Yeh, 1994, p. 5). If the lessees wanted to maintain their land rights, they had to negotiate with the government for the regrant of new leases. The government could (1) refuse the applications if it needed the land for public purposes, (2) repossess land and compensate leaseholders only for the building, and (3) charge a premium at the full market value of the leased land for issuing new leases to lessees (Roberts, 1975, p. 44; Sin, 1987, pp. 12-13). Because the government legally owned the land after the nonrenewable leases expired and had the power to refuse applications for regrant, it should have had a good bargaining position in renegotiating premia with leaseholders. The experience of granting new contracts to holders of nonrenewable leases in the 1970s, however, shows that this was not the case.

### **Delineation Costs**

During my study period, the problem of delineating who had the right to benefit from land seemed to be less problematic for the nonrenewable leases than for the renewable leases. There was no provision in the nonrenewable leases that allowed the lessees to renew their land rights at the end of the lease term. Legally, it was fairly clear that the government possessed all the land rights when leases expired. Yet, the costs of negotiating and enforcing these legal rights impeded the government's ability to capture the increases in land value during the regrant of nonrenewable leases.

### **Negotiation Costs**

The negotiation costs of determining the premium for the regrant of nonrenewable leases were high. Negotiations between the government and leaseholders and among multiple-holders of a single land lease were very complex. As I discussed in Chapter 6, it was not unusual in Hong Kong that a building contained more than 100 units and, thus, many sublessees. When the land lease expired, it would be necessary for each holder to subscribe to a joint written application and to agree collectively on the basic terms of the regrant. It was sometimes very difficult for all the co-owners to agree among themselves even to apply for a new lease.

One main issue was how to divide the required premium and rent of the new lease among themselves. In the negotiations among the sublessees, no party had a better bargaining power than the other, because the land rights and the attached obligations specified in the leases were equally divided among the owners of the apartments in the building. No one could impose her/his will on other parties and force them to agree on the terms of regrant. When the negotiations involved a large number of parties who had different perceptions on what the appropriate amount of premium should be, and how much they could afford to pay to the government, the parties might face a great difficulty in persuading each other to work towards a generally agreed-upon premium for the regrant of their expiring leases. If sublessees

did not reach an agreement and file an application, the government could not initiate any negotiation with them on the new conditions for the regrant. It would only take one sublessee to hold up the procedure of applying for a regrant by refusing to sign an application.

Aside from the above-mentioned problem, lessees claimed that they could not afford to pay the high premium for the regrant. The government, in principle, could take back the land; yet, it needed to compensate the lessees for their buildings erected on the land. Negotiations for the amount of compensation also incurred high costs. All these negotiation costs made the enforcement of the government's right to capture the land value during the regrant of the nonrenewable leases difficult.

### **Enforcement Costs**

During the 1970s, lessees had to pay very high premia to renew their leases because of the rapid increases in land value in Hong Kong. In some cases, the net income received by owners from renting their buildings was insufficient to pay the premia for regrants. This was especially true for buildings that were subjected to rent control. The government introduced the rent-control legislation (the Landlord and Tenant Ordinance) in 1947 and expanded it gradually to cover all residential properties in 1980. Virtually, all rental properties, except for certain luxury accommodations, in Hong Kong were subjected to rent control (Bristow, 1991, p 136). Because the government restricted the rent increases, rental income received by the property owners did not adjust to the inflationary land prices. When rental income fell far behind the increases in land prices, income received from renting was insufficient to cover the required regrant premium.

For owner-occupied buildings with only a few co-proprietors, each owner was responsible for a large share of the premium, which could also be beyond her/his financial capability. Legally, the government could evict the lessees who refused or were incapable to pay the additional premia and rent. Yet, acting like an unsympathetic landlord might engender disapprovals from Hong Kong citizens. Due to the lessees' resistance, the government was not able to enforce the rules for

capturing the land-value increments during the regrant of the nonrenewable leases.

As shown earlier by the aggregate data in Table 6-1, premia gathered from lease renewals accounted for only 2 percent of the total lease premia collected from all mechanisms of land-value capture. Combining these historical data and incidents, I conclude that the government did not capture the land-value increments during lease renewals or regrants. I suspect that the land-rent controversy deterred the government from imposing a premium at the full market value of land in regrating nonrenewable leases. Possibly, the government did not want to face another public outcry in negotiating the premium for regrating the nonrenewable leases with leaseholders.

### **Reducing the Negotiation Costs on the Terms of Regrant**

When multiple sublessees were holding a nonrenewable lease, these parties had to negotiate among themselves first on the term of the regrant before they applied to the government. Because the number of involved parties could be very large in Hong Kong, deadlocks in negotiations occurred and hindered the procedures of regrant. One way a lessee would negotiate the terms of the regrant in her/his favor was to hold up the process by "exiting the bargaining table." Because all the sublessees needed to sign the regrant application, the parties thought that exit from the negotiation would create enough of a threat that the other parties would compromise. Yet, when all the negotiating parties took a similar strategy, collaboration among them became impossible.

In March 1972, the government devised a new procedure to minimize the problem. Using its legislative power, the government established the Crown Rent and Premium (Apportionment) Ordinance. Under this ordinance, when sublessees reached no agreement on the terms of regrating a new contract for an expired nonrenewable lease, the government could issue a new lease to the Financial Secretary Incorporated (FSI). The FSI was a public organization created to manage all government estates. According to the Crown Rent and Premium (Apportionment) Ordinance, the FSI could repossess the leased land and seize the building. It then offered the sublessees the assignment of their shares of the land rights and the ownership of their apartments that

they formerly owned. In the offer, the FSI stated what proportion of the new land rent and premium each sublessee had to pay. If the sublessee of the expiring lease accepted the offer, the FSI would make the assignments to her/him. Both parties then registered their arrangements in the Land Registry. Besides, these lessees had to established a "deed of mutual covenants," regulating the respective rights and obligations among themselves of the common areas and the management of the building. For the sublessees who refused the offer, the FSI could either auction their apartments or rent them to other parties.

The government relied on the methods stipulated in the Crown Rent and Premium (Apportionment) Ordinance to facilitate the regrant of the nonrenewable leases. There had been no significant challenge from the lessees, because the government mainly applied this method to situations when leaseholders were themselves involved in disagreements. Unable to act collectively, resistance to this legislation, as I speculate, could never engender enough resistance to the government's actions. Although this method resolved the problem of a stalemate in the negotiation among sublessees, the assignment of the leased rights of land and the ownership of the apartments were, legally, very complex. Usually, it required considerable expertise and a tremendous amount of time to carry out the procedures. This legislation, though imperfect, lessened the problem of an overrapid exit of the lessees from the negotiation. To avoid the government from using its coercion to impose a premium on them or repossess their properties, the leaseholders were more willing to use persuasion than exit to negotiate with each other. In this case, the law was instrumental in lowering the transaction costs. Although the government lowered the negotiation costs, it faced high enforcement costs of demanding premia from lessees during the regrant of the nonrenewable leases.

### **Unenforceable Right of Capturing Increased Land Value During Regrant**

In 1973, land prices in Hong Kong were extremely high. Lessees who wanted a regrant for their nonrenewable leases found suddenly that they had to pay an extremely high premia. As I discussed earlier, for the lessees whose properties were

subjected to rent control, income generated could not pay for the high premia imposed by the government. To ease the burden of the leaseholders, the government allowed regrantees to pay their premia in 21 annual installments, with an interest charge of 10 percent per annum. The government considered this to be a compromise, although the best lending rate at that time was about 8 percent. This government concession, however, did not solve the problem, because the lessees still had to pay the huge premium to continue their uses of the land.

Without any contractual agreement in the land contract that they could continue their leases, the lessees had no legal justification to challenge the government in courts. They did not want to give the land back to the government, because the negotiations with the government on the compensation for their buildings were also costly. Besides, there were relocation costs, and land prices in general were very high in other parts of Hong Kong. The lessees would have to pay more to obtain a similar parcel of land located in the same area if they gave the land back to the government. Put differently, exit from the contractual agreements with the government was not usually viable. The only strategy that they could employ was to persuade the government that they were not able to pay the premia demanded by it. The argument of the lessees was convincing. Because of the high land prices, the level of rental income that the lessees could earn did not justify the payment demanded by the government for the regrant of the nonrenewable leases.

After the land-rent controversy, the government recognized that its ability to demand payments from the lessees during lease renewals was not unlimited. To avoid a similar public protest, it was reluctant to exert its power to charge high premia for the regrant of the nonrenewable leases. It also could not just terminate the contractual relationships with the lessees by rejecting their applications of regrants, because it had to justify that the repossession of land was for a public purpose. The only option was to negotiate and compromise. It accepted the lessees' reason that they could not afford the high premium for lease renewals. The government announced in September 1975 that it would offer two options to holders of nonrenewable leases to pay for their

premia for regrants.<sup>2</sup> First, similar to the former policy, leaseholders could pay their premia in 21 annual installments with a yearly interest charge of 10 percent. Second, they could choose to pay the government an annual payment that was equal to 70 percent of the net rental income earned from their rental properties. In order to do that, lessees had to maintain their buildings in the current uses. If leaseholders wanted to redevelop their properties, they had to apply to the government for a regrant of their expired leases and pay a premium at the full market value of the land.

Lessees normally selected the latter method, because the payment of 70 percent of the rental income was lower than an annual premium installment. These options were also offered to lessees who occupied their own properties. If these lessees chose the second option, their annual payment to the government would be assessed based on an estimated net rental income of their properties subject to rent-control legislation.

The Executive Council continued the concessionary policy for three years and reviewed it in 1978. It then extended the policy for another two years and scheduled to reexamine it again in 1980. In August 1980, the Executive Council decided that the policy should continue until the government lifted the rent control. It also established the policy that the government should increase all assessed net rental income by 21 percent every two years. This increase was equivalent to the maximum allowable rent increase for buildings subject to the rent-control regulation. These decisions of the Executive Council made the concessionary policy a permanent feature of regranting new land contracts to holders of nonrenewable leases.

In this case, despite the fact that the government had the legal rights to land, the conflict between the government and the lessees related to the land-rent controversy deterred it from using coercion. Under such a situation, the government was more willing to listen to the lessees and able to compromise. The lessees also did not think that they had the ability to challenge the government in the courts, because

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<sup>2</sup> I gathered this information from interviews with officials of the Planning, Environment, and Lands Branch in the summer of 1993.

their land rights legally ceased when their leases expired. They were, thus, less demanding to the concessionary policies proposed by the government.

### **Conclusion**

In this chapter, I studied the politics involved in lease renewals and regrants between the 1970s and the 1980s. For the renewable leases, the land-rent controversy in 1973 shows the potential political problems of negotiating additional payments with leaseholders during lease renewals. Although the government tried to capture the increases in land value by demanding premia from lessees, the public resistance towards its policy led finally to some major government concessions.

The outcome was due to the high transaction costs of capturing the land value during the extension of the renewable leases. The delineation, negotiation, and enforcement costs of the government's right to reap the benefit of increased land value were high. Moreover, lessees were able to employ effectively a combination of persuasion, voice, and exit to resist the government's demands. Although the outcome of Mr. Chang's case set a legal precedent for settling disputes over the allocation of land value for similar cases, lessees used persuasion to engender enough support to challenge the legal rulings at the collective-decision level. The government tried to exercise its legal power to capture the land value, but it was not able to overcome the public resistance. It, thus, compromised. The interplay of strategies that the parties used, in turn, determined the outcome of the land-value capture during the extension of the renewable leases.

Capturing land value during the regrant of the nonrenewable leases was not easier in the 1970s. At least two factors increased the negotiation and enforcement costs. The first factor is when many parties had collective interests in a single lease, there were problems of deriving agreements among them on the terms of the new land contracts. The government was able to use its legislative power to formulate new rules to force the lessees to agree among themselves. In essence, if the lessees could not come up with an agreement, the government would take action to reclaim land and reassign the land rights to the involved lessees individually. This legislation, to some

extent, acted as a threat to discourage the lessees from using exit as a strategy to shape the outcome of the negotiation to their benefits.

The second factor, which was an unresolvable problem, was that lessees claimed that they could not pay the premia. Because the government wanted to avoid a public outcry and the negotiation costs associated with determining the compensation for the displaced lessees, it was unwilling to exercise coercion to take back land. This made the rule of allowing the government to recoup the land-value increments during the regrant of the nonrenewable leases unenforceable. As the lessees were able to persuade the government that they could not pay high premia, the government compromised with lessees by deferring the collection of premia for regranting the nonrenewable leases at the full market value. These two cases explain why the premia collected from lease renewals accounted for only 2 percent of the total lease revenues between 1970 and 1990.

In retrospect, the politics involved in the lease renewals during the 1970s has had an important implication. In 1984, the governments of Britain and the People's Republic of China (PRC) realized that the uncertainty of the future of Hong Kong undermined the confidence of the public. Property owners were concerned with whether the future government would renew their land leases expiring in 1997. The confidence crisis led to a major decline in building activities, and the land prices dropped in the property market.

To deal with the situation, the British and the PRC governments issued the Sino-British Joint Declaration in 1984. In this joint declaration, both governments agree that they will extend all renewable and nonrenewable leases that will expire before or on June 30, 1997 for another fifty years. Leaseholders do not have to pay any additional premium. The government only charges an annual rent calculated at 3 percent of the rateable (rental) value of their properties. The government will adjust the rent level only when it reassesses the rateable value in the future. In essence, to charge a premium at the full market value for renewing land leases in Hong Kong, the government must wait for another 50 years. Whether the future government of Hong Kong can negotiate with leaseholders for a renewal premium at the full market value

is an issue that needs to be studied in the future. At this point, based on the history of the land policy of Hong Kong, capturing the land-value increments during lease extensions and regrants is politically untenable. This may be even more difficult in 2047 when most of the land leases will become due simultaneously.

## **CHAPTER 8**

### **CONCLUSIONS**

Whenever I discuss this research with my colleagues, they always ask, "so, should other governments adopt a leasehold system similar to the one in Hong Kong to manage public land?" I guess that readers may have the same question. The question is very complex, and it deserves a thoughtful answer. The purpose of this concluding chapter is to summarize what we know currently and what we need to research in the future in order to have a satisfactory answer to the question.

In the preceding chapters, I examined three aspects of the Hong Kong leasehold system: (1) the portion of the surplus land value that the Hong Kong government captured by leasing public land, (2) transaction costs associated with the land-value capture, and (3) the minimization of these transaction costs. I first summarize my findings related to these three issues and also relate them to the existing literature. I then discuss the possible policy implications of the lessons learned from my study. Finally, I propose some future research.

#### **Land Value Captured Through Land Leasing**

In this study, I found that the Hong Kong government captured about 39 percent of the increased land value occurring between 1970 and 1991 from land sites leased in the 1970s. More importantly, the captured value financed an average of 55 percent of the government annual expenditures on public works. Along with the money collected from the property tax and rates, the government funded 80 percent of the average annual public infrastructure expenditures. This seems to exceed, by many magnitudes, the amount of recovery of costs on infrastructure that city governments in other developed and developing countries could achieve.

Analyzing this "success" story more carefully, I found that the way that the Hong Kong government recouped the land value does not fit the predictions provided by scholars. They assert that the State can capture the land-value increments by negotiating with lessees for payments when they establish, modify, and renew their land contracts. Among these mechanisms, the Hong Kong government seemed to rely

mainly on premia collected from the initial auctions. Because the government released land gradually into the market, it was able to benefit from the rapid appreciation of land prices. Conversely, money gathered from payments for lease modifications was much less. For land-value capture during lease renewals, the government also could not demand payments from lessees by charging additional premia and a high land rent. As for the annual land rent, the government did not use it to retain the increased land value; thus, money collected from land rent was insignificant.

### **Transaction Costs of Land-Value Capture**

These different outcomes of land-value capture were related to the transaction costs associated with each mechanism. For the initial auctions, transaction costs of capturing land value were low. The Hong Kong government's involvement as a contracting party did not generate high costs. The government was mainly concerned with political stability and the economic development of Hong Kong. It employed land policy as an instrument to raise funds for building public housing and other infrastructure to promote economic and social development. The ability of the government to provide adequate public infrastructure gave it legitimacy to raise funds by auctioning land. This method of assigning land rights utilized the competition among bidders to determine openly the land premia and, thus, minimize the negotiation costs and the opportunity for corruption. Owing to the low transaction costs of capturing the surplus land value by auctioning land, the government generated 90 percent of its total lease revenues from this mechanism between 1970 and 1990.

For lease modifications, only negotiations on the determination of premia for major revisions of lease conditions incurred high costs. The parties might disagree on the amount of premium due to their dissimilar forecasts of the real-estate-market conditions and/or use of different assessment methods. The government and the lessees, hence, had to negotiate in order to determine a mutually agreed-upon premium for lease modifications.

In addition to these negotiation costs, there was another type of negotiation costs that severely impeded the government's ability to recoup the increased land

value through lease modifications. These costs were not related to land-value capture, but were connected to the transfer of land rights from lessees to developers for land redevelopment. When developers did not possess the leases of the land that they wanted to redevelop, they had to purchase the land rights from the existing lessees before they could apply to the government for lease modifications. Leaseholders could use the strategy of exit to hold up the whole project in order to bargain with the developers for better deals. When the negotiation costs were high, the developers would abandon the project and not attempt to modify the land contracts. The opportunity for the government to recoup the land-value increments by revising lease conditions would also be lost. In my contract-based studies, I found that no major lease modification occurred. Premia collected from leases that were modified were of an insignificant amount.

In extending the renewable leases, the government and lessees encountered high costs of delineating and negotiating their rights to benefit from land, because the initial contractual agreements on how to determine the renewed land rent were ambiguous. The lessees thought that they had already purchased the right to renew their leases and, thus, should not pay a high land rent. The government believed that it had the legal right to carry out the initial lease agreements and to charge a new land rent at the full rental value of the property. This disagreement was manifested in public protests. It took four years and a series of public confrontations between the government and the lessees to settle their disputes.

Moreover, the government faced high enforcement costs to exercise its rights specified in the land contracts. Many leases expired simultaneously at the beginning of the 1970s, and the government did not have the capacity to enforce its contractual rights by negotiating with the lessees individually. Due to these high transaction costs, the government did not collect much money from extending the renewable leases.

For the regrant of the nonrenewable leases, the costs to the parties of negotiating and enforcing the initial lease agreements on lease renewal were also high. First, negotiations among lessees on the terms of the regrant were difficult. To apply for a regrant, all holders of the involved land lease had to agree on the amount of

premium and other conditions for renewal. Because the number of involved parties was normally large in Hong Kong, the negotiations incurred high costs. When lessees could not agree among themselves and apply for the regrant, the government could not collect much money from this mechanism. Second, the lessees resisted paying the high premia by claiming that they were not capable of making the payments. Unwilling to use coercion, the government was not able to enforce the lease agreements that allowed it to charge additional premia and land rent for the regrants.

### **Transaction-Costs Minimization**

Both the government and the lessees attempted to lower the transaction costs of dividing the land-value increments so that they could continue their dealings. In the Hong Kong case, no single predominant institution helped to reduce these costs. Instead, outcomes of rule revisions were dependent upon the interplay of strategies employed by the involved parties. The parties carried out their strategies through legal, social, or political channels. Because the choice of strategy was based heavily on the context, different institutions, such as the markets, the polity, and the law, played a distinct role in minimizing transaction costs at a different time.

The interplay of the parties' strategies illustrates why the government failed to recoup the land-value increments during the extension of the renewable leases. Although the government tried to coerce lessees into paying a high land rent by exercising its legal power backed by court rulings, the lessees were able to counter the government's coercion by a combination of strategies. They first persuaded different segments of society to join their resistance against the government's demands. When they gained enough support, they then used voice to oppose the government policy at the collective level. The tactic of voice was later reinforced by the threat of exit by business groups. These strategies engendered tremendous political pressure on the government, and it finally compromised. Through this process, new rules were devised to lower the transaction costs of allocating the increased land value in order to allow the parties to renew and continue their contractual relationships after the leases expired.

In the regrant of the nonrenewable leases, the government attempted to minimize the costs associated with negotiations among sublessees by legislating a new law. With this law, the government forced the lessees either to agree among themselves or it would seize lessees' properties for reassignments of land rights. This law seemed to deter the lessees from using the strategy of exit to hold up the negotiations. Although the government could lower the costs of negotiation among the lessees, the new law might generate costs if the negotiation among lessees still broke down. The government would have to enforce the law by negotiating with individual leaseholders to determine the portion of the premium for which they were responsible and their obligations of maintaining the common areas of the building. These negotiations were lengthy and legally complex.

The government and the lessees also lowered the negotiation costs of determining the payment for lease modification by devising a set of standardized rules for assessing the premium. They established the Hong Kong Institute of Surveyor and the Royal Chartered Surveyor to administer these rules. Members of these two organizations worked for both the public and private sectors. By creating a commonly agreed upon set of rules for assessing land and property values and a mutually intelligible language, persuasion became the most effective strategy to lower the negotiation costs.

The attempts of the government to reduce transaction costs were not always "successful." The government also tried to use its legislative power to establish law so as to lower the negotiation costs of acquiring land rights by developers from lessees for land redevelopment. Yet, its legal power did not go beyond the repossession of land for public purposes. Because these negotiation costs were not directly related to the land-value capture, though they had significant implications on the issue, I do not deal with them in detail in this study. In the last section of this chapter, I will propose this as a future research topic.

**The Hong Kong Case and the New Institutional Economics**

Theories of the New Institutional Economics do not explain two aspects of the Hong Kong case. First, in Hong Kong, the government's involvement in land leasing did not seem to increase transaction costs. Despite the fact that the Hong Kong government owned and controlled all land, there was no evidence of an attempt by government officials to maximize their own benefits at the expense of impeding the private incentives to invest in land and real estate. Moreover, the government did not have uncontested power to seize all benefits from lessees. Conflicts arising from the distribution of land value were generated mainly from unforeseeable events, such as the rapid increases in land prices. As I noted earlier, in the extension of the renewable leases, increases in land value caused disagreements between the government and lessees on how to divide the land benefit. Owing to public pressure, the government yielded to popular demands.

The government did not maintain its control over land by using coercive force. Instead, it gained its legitimacy of being the landowner by persuasive actions. Its land policy did not just benefit the political powerful groups or the business elite, but it also generated land revenues to build public goods for the masses. Unlike the State portrayed by Hobbes (1651), North (1981), Libecap (1989), and other scholars, the Hong Kong government did not behave like a predator or a rent seeker.

Certainly, I am not trying to argue that the New-Institutional-Economic theories of the State are wrong, because scholars normally describe the State as a third party rather than a contracting party. The important aspect of my study is that it shows how the government acting as a landowner affected the allocation of the surplus land value. It appears that public ownership of land in Hong Kong did not increase transaction costs. On the contrary, the government who owned the land had a vested interest in land development and, thus, an incentive to use its legislative power to lower transaction costs.

Second, some New-Institutional-Economic scholars argue that legal institutions are deficient in minimizing transaction costs of contracting. This argument seems valid only in one incident in the Hong Kong case. In the land-rent controversy that I

described in Chapter 7, although the courts found that the government had the legal right to set a high rent for renewing land leases, the final settlement of the dispute through political confrontations reversed the judges' rulings totally. This shows that in order to enforce court rulings, politics has to be taken into consideration. Conversely, in the case of regranting the nonrenewable leases, the establishment of legislation that forced sublessees to agree among themselves on the terms to renew their expiring lease helped to reduce the negotiation costs. Put differently, in the Hong Kong case, there is no consistent evidence to prove whether or not law can lower the transaction costs of land leasing.

I argue that the reason why the existing theories cannot explain the Hong Kong experience coherently is because they neglect the process of institutional change. Most theories focus only on identifying the "appropriate" (or "inappropriate") institutions to minimize transaction costs based on some behavioral assumptions of actors involved. In theory, analysts can design "rationally" which institutions should be established to reduce the costs of transacting. Yet, in the actual process of reforming the existing institutional arrangements, the interplay of strategies employed by the relevant parties who want to protect their benefits could shape outcomes drastically. These outcomes could be totally different from what analysts have designed and expected initially. This creates difficulty in explaining how the contracting parties lower transaction costs by devising new or reforming the existing institutions through time.

Results of transaction-costs reduction in the Hong Kong case shows that a good understanding of the process of rule revisions is important. In designing institutions, such as the markets, the polity, and law, to govern economic exchanges, it is not sufficient for policy makers just to identify which institutions are able to reduce transaction costs. What they need is a framework that helps them to understand the complex process of institutional change. I have developed a possible framework in this study and applied it to examine the Hong Kong case. In the next sections, I discuss how the lessons learned from the experience of land-value capture in Hong

Kong and my framework may assist policy makers there and elsewhere in formulating land policy.

### **Policy Implications**

There are at least two potential policy implications of this study. First, the experience of Hong Kong represents one of the many possible models of capturing land value through public land leasing. Although Hong Kong is unique, officials in other countries can use its experience as a basis to design their own system of land leasing. Second, policy makers may apply the framework to identify transaction costs of land contracting and the plausible outcomes of minimizing these costs. I discuss the Hong Kong approach first and then state how my framework may help policy makers and analysts to adjust and apply the approach.

### **The Hong Kong Approach**

In Hong Kong, the government's approach to capture the land value through land leasing was to collect as much money as possible from lessees at the beginning of the leases. It could not negotiate regularly with lessees on the level of rent and payments for lease modifications and renewals. More importantly, capturing land-value through land leasing does not mean that the government could not collect a property tax. In fact, payments from the property tax and rates accounted for the second largest portion of total land revenues in Hong Kong.

In countries that are experimenting with the leasehold systems, policy makers must think carefully about which mechanisms they will employ to capture the future increases in land value. If they find that the institutional settings in their countries are similar to Hong Kong and want to follow the Hong Kong approach, they must schedule their disposition of land carefully. They should not lease land rapidly when land has a low value. Obtaining a nominal amount of money for leasing the land rights in the beginning may impede the government's ability to capture the land value in the future.

To capture the land value at the beginning of the leases, the government may have to restrict land supply. Analysts have argued that restricting land supply will have negative impacts on the economy. Moreover, if capturing the land-value increments after the initial auctions is politically difficult, governments may just gradually sell the land rights to private individuals. This will allow the State to obtain higher prices than by leasing land because buyers of the land will own all land rights for an unlimited time.

**Restricting Land Supply.** The issue of whether or not the government should control the land supply is a thorny one. In Hong Kong, one argument was that the government should not restrict land supply. Limiting the land supply would drive up land prices. Developers would then pass part of the increases in land prices on to consumers in the form of higher prices for housing and commercial and industrial properties. This, in turn, would increase the costs of living and dampen economic development.

Analysts who made this argument, however, did not consider how the government utilized the captured land value. In this study, I showed that the government used the money to build public infrastructure, such as highways, sea terminals, and public housing. With a population of six million people, it was almost unthinkable that the government could provide all this public infrastructure with a high degree of fiscal independence from its colonial master and foreign-aid agencies.

In terms of whether the restriction on land supply will hinder economic development, I showed in Chapter 2 (Table 2-1) that the Hong Kong economy has been experiencing a rapid rate of growth since the 1960s. Certainly, there are many other factors that led to this exceptional phenomenon, and it is not the subject of my study. Yet, what I can say is that the government's involvement in managing, even controlling, public land did not seem to impede seriously the economic growth of this city-state.

It is undeniable that land prices in Hong Kong are among the highest in the world. This may be due partly to the general land policy of the government, and

partly because of the limited availability of developable land to accommodate its huge population. There are two potential problems of high land prices. The first is that this high price increases the level of difficulty in finding affordable housing for the low- and middle-income groups. As I argue repeatedly, the Hong Kong government has dealt with this problem by allocating part of the land revenues to build public housing. The provision of public housing has lessened the burden of high housing costs on the poor. Half of the population (three million people) is living in public housing or apartments subsidized by the government through the grant of land at below-market values. Recently, the government began to expand its housing program to build apartments for the middle-income group to purchase at below-market values. Indeed, the land-supply policy of the government may, partly, contribute to the rise in land prices. Yet, its land policy also serves as a function of redistributing some land benefits from the hands of the more affluent people to those of the urban poor.

The second effect of high land prices is the potential barrier to entry into the land market. High land prices will allow only developers who are financially capable to bid for land at the public auctions. The limited access to the land market may give developers the power to control the supply of residential and commercial properties. With only a few players in the land market, developers may form a coalition to lower their bids for land at the public auctions. This, in turn, may lower the leasing prices and thus reduce the portion of the land value that the government can capture. This is an issue of which the Hong Kong government and officials of countries who are experimenting with the Hong Kong land-leasing system should be aware.

**Selling Land Gradually.** There are three important considerations to selling, instead of leasing, land gradually. First, the viability of the four mechanisms of land-value capture available under the Hong Kong leasehold system may change through time. During my study period, the government relied on the initial auctions to recoup the land value. It does not mean that the government will not depend more on the other mechanisms in the future. Especially, when the supply of land is limited, future public and private development may exhaust all the undeveloped land in Hong Kong.

Although the government presently continues to "reclaim" land from the sea, this method of creating land may not always keep up with the pace of urban development. Land reclamation requires intensive capital investments and takes a lengthy process to complete. When the availability of land diminishes at the public auctions, this option of retaining the land value will become less viable. The government may then take a more aggressive approach to recouping the increased land value from other mechanisms rather than from the initial auction.

This flexibility does not exist under a freehold system, because private individuals hold all the land rights. Under such a system, the government must count on the levy of property taxes and other land-value-capture techniques to recoup the land-value increments. Certainly, the possibility of retaining the land value from lease renewals and modifications will depend upon the context, the nature of transaction costs at that particular moment, and the strategy used by the parties to minimize these costs. It may again prove to be politically untenable in the future. Yet, these options, at least, remain open for the government under the leasehold system when it retains the ownership of land.

Second, capturing the surplus land value is only one of the three major functions of public land contracting. As I discussed in Chapter 4, it can achieve other policy objectives, such as reserving land for public purposes and managing urban growth. Analysts must understand the general effectiveness of land leasing in achieving these various goals before they can conclude whether to lease or sell land. My results only show how the Hong Kong government captured a large portion of the surplus land value through public land leasing. They do not explain whether the government should or should not use land contracting to organize land-tenure arrangements.

Finally, the constitutions of some countries, such as Hong Kong and some Central and Eastern European countries, do not allow for private ownership of land. Unless policy makers decide to change the constitution, which may involve high political and economic costs, selling land as private property remains as an inconceivable option in these countries.

### **A Framework for Analyzing Public Land Leasing**

Most countries would not possess the type of institutional arrangements found in Hong Kong. Officials, therefore, must modify the Hong Kong approach in order to adopt some aspects of it to their countries. To determine whether countries should or should not adopt the leasehold systems, in general, and the Hong Kong approach, in particular, policy makers may wish to use the framework that I have developed here. First, analysts should identify the four types of transaction costs of public land leasing that I proposed in Chapter 2 under a particular context.

Analysts should not assume that the costs of maintaining the legitimacy of government to negotiate land contracts (government costs) are always high. One reason why I add these costs explicitly to the other types of transaction costs postulated by the New Institutional economists is to help analysts investigate the actual costs of government involvement in land leasing. If, for instance, government costs are high, analysts should determine how the involved parties can minimize these costs. In devising new rules to minimize transaction costs, they should account for the strategies that all involved parties may use to shape the process of rule formation. If bureaucrats have the power to exploit the public land-leasing system, analysts should investigate how the "central" government and other parties can use different strategies to prevent these officials from abusing their power over land. Governments may employ the public auctions to make the process of allocating land rights more transparent to all involved parties. They can also exercise their legislative power to formulate stringent anti-corruption laws. As the Hong Kong case indicated, lessees were not totally powerless in land contracting. They resisted the government's coercion by using voice, exit, and/or persuasion. The result of lowering government costs depends on the interactions of the parties' strategies.

The potential benefits of keeping the ownership of land in the hands of the State may justify the costs of preventing the government from abusing its control over land. I mentioned earlier that leasehold systems may provide some additional viable alternatives for the government to capture the land-value increments, besides property taxes and other techniques. When the State owns all land, it does not have to

purchase land from private landowners to build low-income housing for the poor. Analysts should evaluate all "costs" and "benefits" carefully before deciding on which land-tenure arrangements their countries should adopt.

If the costs of delineating the parties' land rights are high due to some incomplete land contracts, policy makers should focus not just on designing a legal system to minimize these costs. They must also investigate how the relevant parties may react to legal rulings in a particular context. If court decisions engender a false sense of power to the parties and eliminate the possible use of persuasion to resolve conflicts, disputes may be manifested into public protests. The Hong Kong land-rent controversy is a good example. It shows that land leasing was not based solely on contractual agreements between the government and leaseholders enforced by the legal institutions. Instead, politics of negotiation played an important role. Whether governments can capture the land-value increments by land rent and/or payments from lease modifications and renewals will depend upon the political and economic institutional settings of particular countries.

In countries where economies are developing rapidly, the government is sometimes trying to attract investments by granting land to foreign and domestic investors at concessionary prices. The government then attempts to capture the increases in land value after the economy has been developed. In that case, the government must draft the conditions of the land contracts carefully in order to avoid high negotiation costs in the future. They should be certain that there are provisions in the leases that allow them to negotiate with leaseholders on the allocation of benefits generated from land development. These provisions have to be as precise as possible. Any ambiguity in the language may lead to unexpected difficulties in future negotiations between the State and leaseholders.

The parties may minimize these costs by adapting the "relational" contracting approach. Because no one can foresee all future contingencies in contracting, most contracts are incomplete documents in governing the contractual relationships among the involved parties. In business contracts, for example, the parties normally insert some "general clauses" in the contracts that form a framework of contemplating means

to settle unexpected disputes. For public land leasing, the government and lessees can also specify in the land contracts the procedures that the parties must follow to renegotiate the terms of the leases when contingencies arise. They can establish a schedule in order to review and update periodically their agreements on how to divide the land value and to incorporate new land use restrictions into the lease conditions as the planning regulations change.

Depending upon the land uses, a shorter lease term, such as 25 years, with the option to renew may be more appropriate than the 99-year lease term. These lease structures will allow the contracting parties to reassess their land rights and maintain a regular dialogue between them to discuss and adjust their perceptions on each other's rights to land. Certainly, a short duration of the leases may generate insecurity, but the option to renew will minimize this problem. Besides, short lease terms may increase the negotiation costs, because the government must renegotiate with lessees when leases expire fairly often. Yet, with adjustments made incrementally to the contractual agreements, it may avoid the problems of negotiation found in the Hong Kong land-rent controversy. This is especially important for places where land value is rising rapidly. A shorter lease term may avoid the potential disputes between the State and lessees over the allocation of future increased land value by allowing the parties to identify and reconcile their different expectations on each other's land rights through regular negotiations. For countries that are undergoing political and economic reforms, not only would political confrontations undermine the stability of property-rights arrangements of land, but it could also disturb the prospect of the reforms.

### **Future Research Topics**

Land leasing has seemed to allow the Hong Kong government to capture the surplus land value. Despite the current knowledge about land leasing, I have to do additional research before I can determine whether or not adopting land leasing is desirable in general. There are, at least, four major research areas that I need to investigate thoroughly.

### **Extension of the Hong Kong Study to Other Cities**

The first topic is to investigate whether my findings related to the surplus land value capturing in Hong Kong is a universal phenomenon. I can apply the framework developed in this study to analyze public land leasing in Singapore, because this city-state is, to some extent, comparable to Hong Kong. Although not all land is owned by the Singapore government, there is a large portion of land that is held under public leases. In terms of land area, Hong Kong is twice the size of Singapore. Hong Kong has a population of 6 million, while Singapore has only about 3 million. Both Hong Kong and Singapore are city-states in Southeast Asia with few natural resources; yet, both experienced rapid economic growth since the 1960s. Both cities were once under the domination of the British during the 19th century.

The major difference between Hong Kong and Singapore is the degree of government involvement in industrial development. Relatively speaking, the State of Singapore has developed a more active policy to intervene in the economy. Public enterprises dominate the business activities in this city; whereas the Hong Kong government relies more on private initiatives to develop and invest in the economy.

One purpose of such a study would be to examine whether the government of Singapore encounters transaction costs of land contracting similar to those found in Hong Kong. The other purpose would be to test how applicable my framework is in analyzing the minimization of these transaction costs in Singapore.

### **Conflict Between Urban Planning and Lease Conditions**

Another important issue that goes beyond the capturing of surplus land value is the conflict between urban planning and the lease conditions. As I mentioned in Chapter 4, in Hong Kong, lease conditions stipulated in land contracts cannot be adjusted easily to reflect changes in the zoning plan. Once the government and the lessees establish the lease conditions, the government cannot alter them until the leases expire. Lessees, of course, can change lease conditions by paying additional premia. Yet, when the government tries to change lease conditions due to revisions of the zoning plan, it is unclear whether it needs to compensate leaseholders.

Moreover, the procedure of repossessing land from lessees for public purposes in Hong Kong is complicated by the contractual agreement between the government and leaseholders. In the contracts, the government agrees that the lessees possess certain land rights for a specific time. If the government takes land or imposes new conditions before leases expire, it will violate the contractual agreements. Some analysts argue that statutory laws always override contractual agreements; thus, the government should be able to take land and not worry about the agreements that it previously made with leaseholders. Yet, the loss of public confidence in the leasehold system is undesirable. Although land is publicly owned in Hong Kong, the government also relies on private initiatives to develop land and real estate. Any reduction of private investment in land will hinder the growth and stability of the Hong Kong economy.

This is an important topic that governments in other countries should be aware of when adopting a leasehold system. Indeed, if governments want to use the lease conditions to manage urban growth, they must establish a detailed and well-designed master plan. Conditions of the leases must be based on the master plan. Governments should also add some provisions in the land leases that specify the procedures and rules for negotiation when there are changes in the master plan and, thus, the lease conditions. The questions of how governments can do that will require an in-depth analysis of the Hong Kong case or other leasehold systems in the world.

### **Urban Redevelopment Under a Leasehold System**

The negotiation problems found in Hong Kong related to the acquisition of land rights and assembly of land for urban redevelopment are, indeed, very similar to those found in other countries. The issues of holding out and disputes over compensations are common. The question is: does land leasing in Hong Kong complicate (or ease) the problems of negotiations involved in urban redevelopment?

In theory, under the Hong Kong leasehold system, the government can deny lessees' applications for the regrant of their nonrenewable leases. It can then take back land and compensate the lessees for the building only. Thus, land leasing should

reduce the amount of compensation that the government needs to pay to lessees in repossessing land.

One problem of this scheme is that the government must wait for leases to expire before it can assemble land for urban renewal. If it wants to take land before the leases expire, its action will breach the land contracts. Could the government establish a general clause in the land contracts that will allow it to repossess land before the leases expire? If so, what are the implications of such a lease condition on land leasing? How should the government calculate the amount of compensation if the repossession of land is for public purposes or redevelopment? Should it compensate the lessees based on the land rights granted and specified in the land contracts, or should the compensation be estimated based on the future uses of the land? These are some of the major questions that I need to investigate. Besides, it is unclear what type of resistance the government will encounter from lessees in land repossession, even though it, legally, owns all the land rights when land leases expire.

### **Land Leasing to Special Industries**

I could also study the use of land leasing to grant land to special industries. This issue is especially important for officials in some countries who are using land as public capital to attract foreign investment. Because leasing land to special industries is based on negotiation between the government officials and the selected industrialists, the allocation of land resources will rely heavily on the discretion of these civil servants. The question is: what are the institutional mechanisms that can ensure the granting of valuable land to "appropriate" industries? Some institutional arrangements are needed that will safeguard the parties from any possible favoritism and corruption. When land transactions involve a large amount of money, the temptation of taking or giving bribes is high.

In my study, I examined only the assignment of land rights at the public auctions, because it represents the major method that the Hong Kong government uses to allocate land rights to private individuals. The government has also formulated a policy to grant land sites to selective industries by establishing private treaties. By

understanding how the government selects the special industries and what the procedures are in negotiating the premium, governments in other countries may be able to design a better system of land disposition to attract special industries.

By studying these issues in detail, I will be able to provide a reasonable answer to the question of whether or not governments in other countries should adopt a leasehold system. Public land leasing is a complex subject. My current study represents only an initial step towards a large research topic. I hope that my work will stimulate more empirical and theoretical research on this subject. More importantly, I hope that my findings, though related only to one aspect of land leasing, will help policy makers to make better judgments in formulating land policy that will affect the livelihoods of many people for a very long time.

**APPENDIX A.**  
**ALTERNATIVE METHODS OF LAND-VALUE CAPTURE**

Among many methods of land-value capture, there are four techniques that are most often used in the United States and developing countries: (1) special assessments, (2) exaction, (3) valorization charges, and (4) land readjustment. In this appendix, I briefly discuss the potential shortcomings of these techniques in order to provide some quick references and the background for my discussion of the land-value-capture issues in Chapter 1. Readers should refer to the articles and books that I cite here for more detailed discussions of the pros and cons of these methods.

**Special Assessment**

Ideally, a special assessment is the application of the principle that those who benefit from a public project should pay for it. Special assessments are mostly used to build residential streets, sidewalks, and an occasional sewer. Property owners within the "affected" community who are "benefited" by public-infrastructure improvements must pay for them (Misczynski, 1978, pp. 311-335).

There is, at least, one technical problem. Government officials can apply special assessments only to local public projects in which benefits are related (or can be traced) particularly to some parcels of land. Officials cannot apply this technique to public investments, such as highways and seaports, that have no easily identifiable beneficiaries of the project. In fact, benefits of many public projects are neither totally "local" nor "general." There are problems of defining a local or a general benefit, and this, in turn, may make the recapturing of the increased land value using a special assessment difficult.

**Exaction**

With the ability of local governments to levy taxes constrained by their state constitutions, officials are turning their power to control land use into a power to generate revenue. As Altshuler and Gómez-Ibáñez (1993) argue, "regulation for revenue" has become an important way to provide public infrastructure to

accommodate urban growth in the United States and other Western countries (Jacobsen and McHenry, 1978, pp. 342-366). An exaction grants a permit to a developer for developing land under the conditions that s/he must provide certain public infrastructure. An exaction may be in-kind or financial. In-kind exactions require developers to contribute land, construct public facilities, or provide public services. Financial exactions are in the form of "impact" fees. The rationale for demanding exactions from developers is that the "costs" created by their new development should be accounted for in the total costs of their projects.

Some analysts argue that an exaction is a form of government extortion or "zoning for sale." This system grants a great deal of discretion to local officials and could create the opportunity for bribery. Besides, the ability of developers to pay for the exaction is dependent upon the market conditions. The bargaining position of the government to demand the provision of infrastructure will be weak in a real estate market that experiences a downward trend. (Altshuler and Gomez-Ibanez, 1993).

### **Valorization Charges**

In developing countries, governments have also used other methods besides property taxes to capture land-value increments. A valorization charge (also referred to as a betterment tax) is one of them. It represents a system of taxation that is designed to recover costs of public works from affected property owners.<sup>1</sup> In principle, the valorization charges are proportional to the benefits that property owners gained in public projects. Due to the resistance to the general increase in taxation to finance public infrastructure, valorization charges have the comparative advantage of being more equitable by levying taxes only on project-specific areas.

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<sup>1</sup> The concept of a valorization charge is somewhat different from a betterment tax. While policy makers attempt to use a valorization charge to recover only the cost of infrastructure provision, they normally use a betterment tax to recapture all the increment in land values associated with government projects. In practice, however, this distinction is usually blurred.

The major challenge to a policy maker is using valorization charges to apportion the total costs of a project to the affected property owners. In Bogota, for example, the State allocates the charges based on a complex coefficient system and ten features of each property that are considered to be most important in determining value. The calculated coefficients just reflect the differential economic impacts of the project on property in relation to the distance from the project, lot sizes, topography, land use, and the socioeconomic composition of the neighborhood. Analysts then convert these coefficients into measurements of benefits received by each parcel and then allocate the budget costs to each parcel accordingly. See Doebele, et al. (1979, pp. 76-80) for the application of this technique in Bogotá.

Valorization is technically and administratively complex because an accurate measurement of the specific impacts on land values of public works separated from other influences is very difficult (Shoup, 1978, p. 75; Doebele et al., 1979, p. 90). Besides, the collection of valorization charges is costly and difficult. The lag between the time expenditures are made and the time costs are recovered may also lead to liquidity problems.

### **Land Readjustment**

Another method employed with some success in Japan, Korea, and Taiwan is land readjustment (Doebele, 1982; Acharya, 1982, pp. 103-117). In land readjustment, the role of the government is similar to a developer, and the development is mainly financed by the increased value of the developed land. When an area is "ripe" for development, the government declares a "land readjustment project." In the project, the government prepares a detailed development plan, subdividing the area into sections for public use and private development. The State then assembles land from owners of the project. Landowners do not receive any cash compensation; instead, a portion of their land is returned to them with the provision of services. The amount of land that owners receive depends on the "cost-equivalent rate." This rate is determined by the amount of land for public use and the costs of providing services to

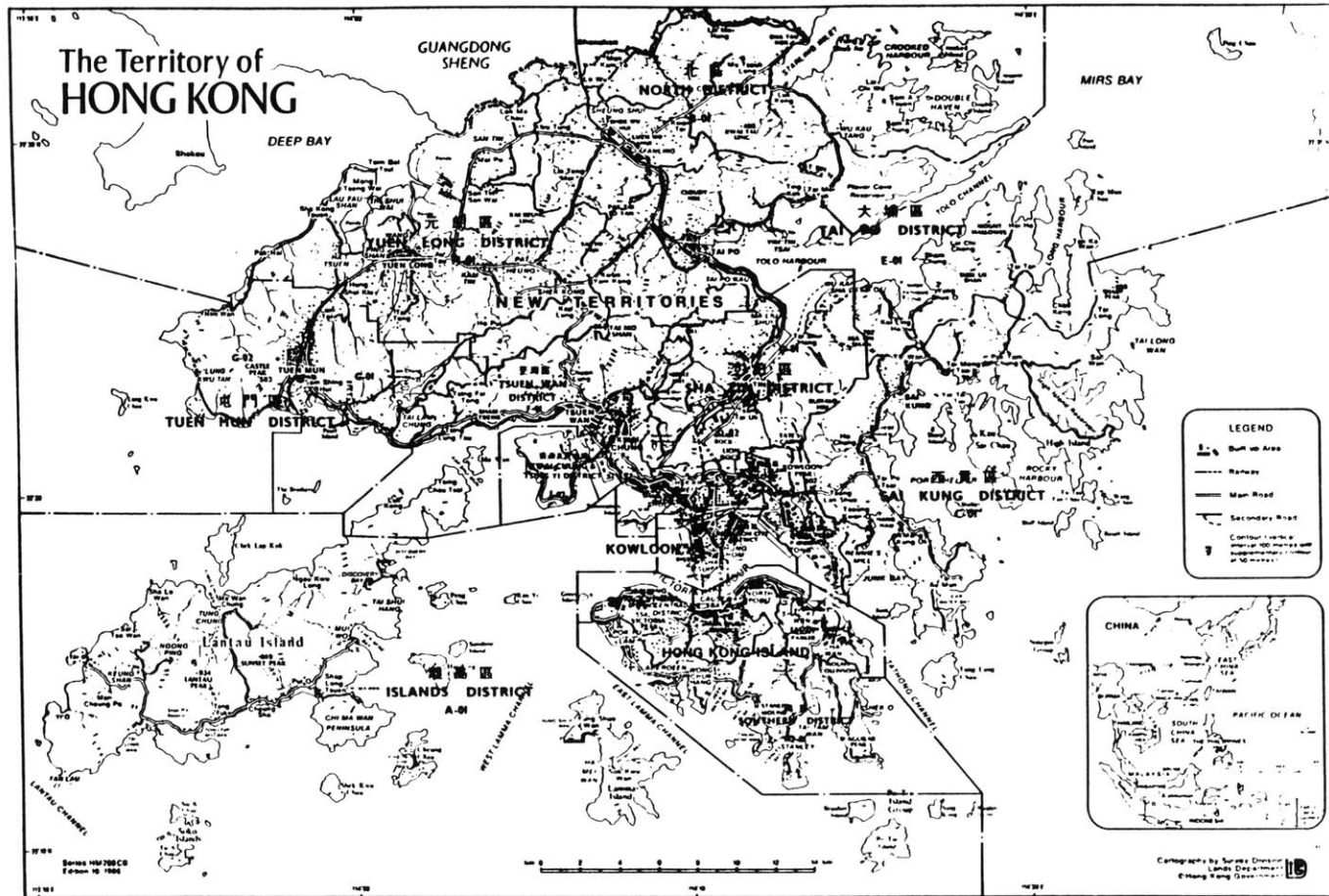
the land.<sup>2</sup> Under this arrangement, the government can recover the project costs by selling the served land and also obtain land for urban infrastructure with no exchange of cash. Because the served land commands a high value in the market, the government can usually use the land returned to owners to compensate for the amount of land they lost.

Public leasehold system may have at least two advantages over these methods. I have discussed these advantages in Chapter 1 and will not repeat them here.

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<sup>2</sup> See Doebele (1982) for a detailed discussion of the technical aspects of calculating the cost-equivalent rate.

APPENDIX B.  
THE TERRITORY OF HONG KONG



Source: Miners, Norman. 1991. The Government and Politics of Hong Kong. Hong Kong: Oxford University Press.

### APPENDIX C.

#### CALCULATION OF THE PERCENTAGE OF LAND-VALUE CAPTURE

In this appendix, I explain the calculation of the percentage of land-value capture (PLVC) in detail. The equation for calculating the PLVC for a specific land parcel is:

$$PLVC = \frac{Prm_{Ini} + Prm_{Mod} + R - LV_{70}}{LV_{91} - LV_{70}}$$

where

PLVC = Percentage of Land-value Capture  
Prm<sub>Ini</sub> = Premium from Initial Public Auction  
Prm<sub>Mod</sub> = Premium from Lease Modifications  
R = Annual Rent  
LV<sub>70</sub> = Estimated 1970 land value  
LV<sub>91</sub> = Estimated 1990 land value

I simplify the equation by removing LV<sub>70</sub> from the nominator and denominator. The equation becomes:

$$PLVC = \frac{Prm_{Ini} + Prm_{Mod} + R}{LV_{91}}$$

In the simplified equation, I only have to estimate the 1991 land value to assess the PLVC.

Appendix D  
**LAND REVENUES AND PUBLIC INFRASTRUCTURE EXPENDITURES OF SELECTED CITIES: 1970-1991**  
(Millions of 1991 US Dollars)

| HONG KONG  | 1970    | 1971    | 1972    | 1973    | 1974    | 1975    | 1976    | 1977    | 1978    | 1979    | 1980    | 1981     | 1982     | 1983    | 1984    | 1985    | 1986    | 1987    | 1988     | 1989     | 1990     | 1991     | Average |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|---------|---------|---------|---------|----------|----------|----------|----------|---------|
| Total Government Revenue                         | 1,961.1 | 2,591.1 | 2,903.2 | 3,536.6 | 3,879.3 | 4,112.7 | 4,483.8 | 4,983.9 | 6,392.7 | 6,284.6 | 8,451.8 | 11,613.0 | 10,905.3 | 7,524.5 | 6,293.0 | 7,733.5 | 8,466.3 | 8,901.4 | 10,369.8 | 11,292.3 | 11,815.4 | 11,519.8 | 7,091.6 |
| Total Revenues from Land & Fixed Assets          | 488.9   | 688.0   | 694.4   | 923.4   | 653.6   | 635.6   | 760.1   | 1,023.7 | 1,839.7 | 1,729.8 | 2,145.5 | 3,966.1  | 3,777.0  | 1,662.9 | 925.2   | 1,364.4 | 1,333.5 | 1,062.6 | 1,192.9  | 1,630.3  | 1,683.6  | 1,191.4  | 1,427.0 |
| Property Tax                                     | 51.8    | 57.2    | 62.3    | 59.5    | 103.2   | 101.9   | 98.5    | 168.1   | 151.9   | 119.4   | 149.9   | 126.9    | 243.5    | 188.6   | 124.6   | 170.8   | 135.9   | 165.3   | 152.5    | 135.1    | 136.6    | 146.5    | 130     |
| Rates  | 250.0   | 278.4   | 296.2   | 273.3   | 269.7   | 280.9   | 356.3   | 411.5   | 451.6   | 403.8   | 447.5   | 378.1    | 334.0    | 168.6   | 239.2   | 245.3   | 343.0   | 217.6   | 233.9    | 235.6    | 238.4    | 391.1    | 307     |
| Rent   | 91.3    | 127.5   | 118.8   | 119.9   | 47.7    | 54.8    | 74.6    | 73.5    | 92.1    | 201.7   | 116.4   | 112.3    | 124.1    | 84.2    | 92.1    | 91.7    | 100.0   | 114.5   | 129.6    | 209.0    | 209.4    | 107.9    | 113     |
| Land Sale & Income                               | 95.8    | 224.9   | 217.2   | 470.7   | 232.9   | 198.0   | 230.6   | 370.7   | 1,144.1 | 1,004.9 | 1,431.7 | 3,348.9  | 3,075.4  | 1,221.5 | 469.3   | 856.6   | 754.6   | 565.2   | 677.0    | 1,050.3  | 1,099.3  | 546.0    | 877     |
| Land Revenue as Percentage of Total Revenues     | 24.9%   | 26.6%   | 23.9%   | 26.1%   | 16.8%   | 15.5%   | 17.0%   | 20.5%   | 28.8%   | 27.5%   | 25.4%   | 34.2%    | 34.6%    | 22.1%   | 14.7%   | 17.6%   | 15.8%   | 11.9%   | 11.5%    | 14.4%    | 14.2%    | 10.3%    | 20.1%   |
| Total Government Expenditures                    | 1,606.6 | 2,055.2 | 2,370.1 | 3,111.1 | 3,824.1 | 4,589.6 | 4,054.2 | 4,383.6 | 5,620.8 | 5,550.4 | 6,990.5 | 9,045.5  | 8,828.4  | 8,371.4 | 6,912.7 | 8,005.8 | 8,417.6 | 8,778.5 | 9,136.7  | 10,070.9 | 11,746.0 | 10,982.9 | 6,565.6 |
| Total Government Expenditures on Public Works    | 359.5   | 567.8   | 695.8   | 1,251.2 | 1,442.2 | 1,501.9 | 1,161.1 | 1,114.6 | 1,932.8 | 1,902.9 | 2,221.3 | 2,075.5  | 1,464.5  | 1,078.7 | 833.0   | 2,402.7 | 2,391.8 | 2,342.8 | 2,522.0  | 2,957.4  | 3,854.1  | 3,381.4  | 1,793.4 |
| Public Works Exp. as Percentage of Total Exp.    | 22.4%   | 27.6%   | 29.4%   | 40.2%   | 37.7%   | 32.7%   | 28.6%   | 25.4%   | 34.4%   | 34.3%   | 31.8%   | 56.1%    | 39.2%    | 12.9%   | 12.1%   | 30.0%   | 28.4%   | 26.7%   | 27.6%    | 29.4%    | 32.8%    | 30.8%    | 27.3%   |
| Land Revenue as Percentage of Total Expenditures | 30.4%   | 33.5%   | 29.3%   | 29.7%   | 17.1%   | 13.8%   | 18.7%   | 23.4%   | 32.7%   | 31.2%   | 30.7%   | 43.8%    | 42.8%    | 19.9%   | 13.4%   | 17.0%   | 15.8%   | 12.1%   | 13.1%    | 16.2%    | 14.3%    | 10.8%    | 21.7%   |
| Land Revenue as Percentage of Public Work Exp.   | 136.0%  | 121.2%  | 89.8%   | 73.8%   | 45.3%   | 42.3%   | 65.5%   | 91.8%   | 95.2%   | 90.9%   | 96.6%   | 78.1%    | 109.0%   | 154.2%  | 111.1%  | 56.8%   | 55.8%   | 45.4%   | 47.3%    | 55.1%    | 43.7%    | 35.2%    | 79.6%   |

| CHICAGO, ILLINOIS                                | 1970    | 1971    | 1972    | 1973    | 1974    | 1975    | 1976    | 1977    | 1978    | 1979    | 1980    | 1981    | 1982    | 1983    | 1984    | 1985    | 1986    | 1987    | 1988    | 1989    | 1990    | 1991    | Average |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total Government Revenue                         | 2,489.9 | 2,889.0 | 2,978.7 | 3,326.8 | 3,208.7 | 3,188.7 | 3,031.5 | 3,227.1 | 3,397.3 | 3,045.2 | 3,107.6 | 3,013.5 | 3,103.7 | 3,305.1 | 3,173.1 | 3,199.5 | 3,468.0 | 3,671.2 | 3,727.9 | 3,527.4 | 4,115.8 | 4,302.0 | 3,295.2 |
| Total Revenues from Land & Fixed Assets          | 783.2   | 915.1   | 967.2   | 1,046.6 | 880.7   | 792.8   | 766.0   | 717.3   | 633.1   | 571.6   | 515.8   | 514.3   | 474.3   | 507.8   | 521.0   | 491.2   | 506.9   | 456.8   | 580.0   | 548.2   | 685.6   | 594.4   | 657.6   |
| Property Tax                                     | 762.5   | 900.6   | 946.7   | 1,028.5 | 865.6   | 780.9   | 750.6   | 706.6   | 624.4   | 564.7   | 506.7   | 506.6   | 467.9   | 501.1   | 516.0   | 491.2   | 500.3   | 453.2   | 577.0   | 541.8   | 682.8   | 591.3   | 657.6   |
| Special Assessments                              | 20.6    | 14.5    | 20.4    | 18.1    | 15.1    | 11.9    | 15.4    | 10.7    | 8.7     | 6.9     | 9.1     | 7.8     | 6.5     | 6.7     | 5.0     | 0.0     | 6.6     | 3.6     | 3.0     | 4.4     | 2.7     | 3.2     | 3.2     |
| Land Revenue as Percentage of Total Revenues     | 31.5%   | 31.7%   | 32.5%   | 31.5%   | 27.5%   | 24.9%   | 25.3%   | 22.2%   | 18.6%   | 18.8%   | 16.6%   | 17.1%   | 15.3%   | 15.4%   | 16.4%   | 15.4%   | 14.6%   | 12.4%   | 15.6%   | 15.5%   | 16.7%   | 13.8%   | 20.0%   |
| Total Government Expenditures                    | 2,692.7 | 2,861.3 | 3,096.6 | 3,105.6 | 2,949.2 | 2,813.5 | 6,060.9 | 2,981.5 | 2,943.6 | 2,742.6 | 2,856.9 | 3,048.0 | 2,801.7 | 3,125.5 | 2,965.1 | 2,894.0 | 3,147.2 | 3,842.5 | 3,660.0 | 3,499.9 | 3,713.2 | 3,653.4 | 3,239.4 |
| Total Government Expenditures on Public Works    | 1,387.5 | 1,467.0 | 1,484.0 | 1,344.6 | 1,374.2 | 1,293.9 | 1,048.3 | 1,287.2 | 1,302.6 | 1,216.6 | 1,386.7 | 2,010.6 | 1,253.5 | 1,373.0 | 1,376.9 | 1,492.7 | 1,702.8 | 2,044.3 | 1,994.1 | 1,849.4 | 2,039.6 | 1,826.4 | 1,524.3 |
| Public Works Exp. as Percentage of Total Exp.    | 50.8%   | 51.3%   | 47.9%   | 43.3%   | 46.6%   | 46.0%   | 17.3%   | 43.2%   | 44.3%   | 44.4%   | 48.5%   | 66.0%   | 44.7%   | 43.9%   | 46.4%   | 51.6%   | 54.1%   | 56.1%   | 54.3%   | 52.8%   | 54.9%   | 50.0%   | 47.1%   |
| Land Revenue as Percentage of Total Expenditures | 29.1%   | 32.0%   | 31.2%   | 33.7%   | 29.9%   | 28.2%   | 12.6%   | 24.1%   | 21.5%   | 20.8%   | 18.1%   | 16.9%   | 16.9%   | 16.2%   | 17.6%   | 17.0%   | 18.1%   | 12.5%   | 15.8%   | 15.6%   | 18.5%   | 16.3%   | 20.3%   |
| Land Revenue as Percentage of Public Work Exp.   | 57.3%   | 62.4%   | 65.2%   | 77.8%   | 64.1%   | 61.3%   | 73.1%   | 55.7%   | 48.6%   | 47.0%   | 37.2%   | 25.6%   | 37.8%   | 37.0%   | 37.8%   | 32.9%   | 29.8%   | 22.3%   | 29.1%   | 29.5%   | 33.6%   | 32.5%   | 43.1%   |

| LOS ANGELES, CALIFORNIA                          | 1970    | 1971    | 1972    | 1973    | 1974    | 1975    | 1976    | 1977    | 1978    | 1979    | 1980    | 1981    | 1982    | 1983    | 1984    | 1985    | 1986    | 1987    | 1988    | 1989    | 1990    | 1991    | Average |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total Government Revenue                         | 3,051.4 | 3,303.0 | 3,543.8 | 3,976.6 | 3,992.2 | 4,035.3 | 4,278.5 | 4,466.5 | 4,950.6 | 4,858.4 | 4,432.6 | 4,790.0 | 4,717.1 | 4,735.6 | 5,076.2 | 5,408.3 | 5,963.8 | 6,110.6 | 6,125.5 | 6,576.3 | 6,875.7 | 6,582.4 | 4,893.1 |
| Total Revenues from Land & Fixed Assets          | 645.3   | 701.5   | 709.8   | 741.7   | 687.7   | 647.9   | 703.3   | 729.9   | 757.0   | 393.1   | 423.5   | 446.7   | 449.7   | 483.2   | 512.2   | 525.8   | 582.8   | 611.4   | 655.6   | 680.3   | 671.5   | 699.2   | 611.9   |
| Property Tax                                     | 597.9   | 618.3   | 639.8   | 671.8   | 622.1   | 600.6   | 657.5   | 685.2   | 699.6   | 339.4   | 394.0   | 415.0   | 416.3   | 455.9   | 476.1   | 476.2   | 548.1   | 569.9   | 596.1   | 622.6   | 659.9   | 689.5   | 611.9   |
| Land Sale & Income                               | 47.4    | 83.2    | 70.0    | 69.9    | 65.6    | 47.3    | 45.8    | 44.7    | 57.5    | 53.7    | 29.5    | 34.7    | 33.3    | 27.3    | 36.1    | 49.6    | 34.7    | 41.5    | 59.5    | 57.8    | 11.5    | 9.7     | 9.7     |
| Land Revenue as Percentage of Total Revenues     | 21.1%   | 21.2%   | 20.0%   | 18.7%   | 17.2%   | 16.1%   | 16.4%   | 16.3%   | 15.3%   | 8.4%    | 9.6%    | 9.4%    | 9.5%    | 10.2%   | 10.1%   | 9.7%    | 9.8%    | 10.0%   | 10.7%   | 10.3%   | 9.8%    | 10.6%   | 12.5%   |
| Total Government Expenditures                    | 3,227.8 | 3,549.1 | 3,803.0 | 3,960.5 | 3,661.6 | 3,838.8 | 4,134.2 | 3,942.2 | 4,467.0 | 4,059.0 | 4,397.4 | 4,106.4 | 4,185.2 | 4,343.3 | 4,514.4 | 4,614.8 | 5,188.0 | 5,345.9 | 6,080.5 | 5,942.6 | 6,732.3 | 6,273.7 | 4,562.2 |
| Total Government Expenditures on Public Works    | 3,068.5 | 3,272.4 | 3,459.1 | 3,512.7 | 3,190.1 | 3,257.4 | 3,502.3 | 3,073.7 | 3,483.4 | 3,179.3 | 3,574.7 | 3,311.9 | 3,596.9 | 3,717.9 | 3,781.7 | 3,880.7 | 4,215.3 | 4,127.2 | 5,426.3 | 4,820.5 | 5,866.2 | 5,150.2 | 3,839.5 |
| Public Works Exp. as Percentage of Total Exp.    | 95.1%   | 92.2%   | 91.0%   | 88.7%   | 87.1%   | 84.9%   | 84.7%   | 78.0%   | 78.0%   | 78.3%   | 81.3%   | 80.7%   | 85.9%   | 85.6%   | 83.8%   | 84.1%   | 81.3%   | 77.2%   | 89.2%   | 81.1%   | 87.1%   | 82.1%   | 84.2%   |
| Land Revenue as Percentage of Total Expenditures | 20.0%   | 19.8%   | 18.7%   | 18.7%   | 18.8%   | 16.9%   | 17.0%   | 18.5%   | 16.9%   | 9.7%    | 9.6%    | 11.0%   | 10.7%   | 11.1%   | 11.3%   | 11.4%   | 11.2%   | 11.4%   | 10.8%   | 11.4%   | 10.0%   | 11.1%   | 13.4%   |
| Land Revenue as Percentage of Public Work Exp.   | 21.0%   | 21.4%   | 20.5%   | 21.1%   | 21.6%   | 19.9%   | 20.1%   | 23.7%   | 21.7%   | 12.4%   | 11.8%   | 13.6%   | 12.5%   | 13.0%   | 13.5%   | 13.5%   | 13.8%   | 14.8%   | 12.1%   | 14.1%   | 11.4%   | 13.6%   | 15.9%   |

Appendix D  
 LAND REVENUES AND PUBLIC INFRASTRUCTURE EXPENDITURES OF SELECTED CITIES: 1970-1991 (Continued)  
 (Millions of 1991 US Dollars)

|   | 1970     | 1971     | 1972     | 1973     | 1974     | 1975     | 1976     | 1977     | 1978     | 1979     | 1980     | 1981     | 1982     | 1983     | 1984     | 1985     | 1986     | 1987     | 1988     | 1989     | 1990     | 1991     | Average  |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>NEW YORK CITY, NEW YORK</b>                    |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Total Government Revenue                          | 27,258.7 | 29,668.6 | 32,579.9 | 34,546.0 | 32,718.6 | 36,319.6 | 37,363.1 | 38,410.4 | 34,349.8 | 31,681.2 | 30,853.3 | 30,227.8 | 29,619.4 | 32,159.5 | 32,434.9 | 35,752.6 | 37,708.3 | 39,270.6 | 39,515.6 | 38,381.7 | 39,526.7 | 41,061.1 | 34,518.5 |
| Total Revenues from Land & Fixed Assets           | 6,811.1  | 6,831.4  | 6,952.6  | 7,245.7  | 6,932.8  | 6,819.7  | 7,250.2  | 7,478.6  | 7,048.5  | 6,214.8  | 5,603.6  | 5,236.1  | 5,424.4  | 5,456.7  | 5,456.1  | 5,627.8  | 5,969.3  | 6,212.2  | 6,381.3  | 6,637.5  | 6,888.9  | 7,313.1  | 6,436.1  |
| Property Tax                                      | 6,580.7  | 6,806.0  | 6,936.3  | 7,234.4  | 6,918.9  | 6,810.7  | 7,250.0  | 7,478.6  | 7,038.4  | 6,190.8  | 5,596.1  | 5,236.7  | 5,409.0  | 5,451.6  | 5,451.8  | 5,617.2  | 5,952.4  | 6,173.8  | 6,349.7  | 6,637.5  | 6,888.9  | 7,313.1  | 6,436.1  |
| Special Assessments                               | 30.4     | 25.4     | 13.3     | 11.3     | 14.0     | 9.0      | 0.2      | 0.0      | 10.0     | 24.1     | 7.5      | 1.4      | 15.4     | 5.0      | 4.3      | 10.6     | 17.0     | 38.4     | 31.8     | 0.0      | 0.0      | 0.0      | 0.0      |
| Land Revenue as Percentage of Total Revenues      | 24.3%    | 23.0%    | 21.3%    | 21.0%    | 21.2%    | 18.8%    | 19.4%    | 20.5%    | 20.5%    | 19.6%    | 18.2%    | 17.3%    | 18.3%    | 17.0%    | 16.8%    | 15.7%    | 15.8%    | 16.1%    | 17.3%    | 17.4%    | 17.8%    | 17.8%    | 18.6%    |
| Total Government Expenditures                     | 28,163.1 | 32,252.8 | 34,875.1 | 35,304.4 | 34,672.0 | 35,831.0 | 36,695.6 | 33,392.8 | 31,750.0 | 28,267.8 | 27,515.1 | 27,389.8 | 28,640.6 | 29,118.7 | 31,063.6 | 32,822.8 | 34,748.8 | 36,389.5 | 36,651.6 | 37,852.0 | 39,342.1 | 40,776.9 | 33,341.6 |
| Total Government Expenditures on Public Works     | 8,917.8  | 10,148.5 | 10,180.0 | 11,109.8 | 11,731.4 | 11,805.3 | 9,734.8  | 8,628.9  | 8,348.0  | 8,586.9  | 8,877.1  | 9,448.7  | 10,102.8 | 10,252.5 | 10,786.7 | 11,024.0 | 12,200.1 | 12,159.8 | 12,341.8 | 13,490.5 | 14,783.4 | 15,304.3 | 10,902.4 |
| Public Works Exp. as Percentage of Total Exp.     | 31.7%    | 31.5%    | 29.2%    | 31.5%    | 33.8%    | 32.4%    | 26.5%    | 25.8%    | 26.3%    | 30.4%    | 32.3%    | 34.5%    | 35.3%    | 35.2%    | 34.7%    | 33.6%    | 35.1%    | 33.4%    | 33.7%    | 35.6%    | 37.6%    | 37.8%    | 32.7%    |
| Land Revenues as Percentage of Total Expenditures | 23.5%    | 21.2%    | 19.9%    | 20.5%    | 20.0%    | 19.0%    | 19.8%    | 22.4%    | 22.2%    | 22.0%    | 20.4%    | 19.1%    | 18.9%    | 18.7%    | 17.6%    | 17.1%    | 17.2%    | 17.1%    | 17.4%    | 17.5%    | 17.5%    | 17.9%    | 19.3%    |
| Land Revenues as Percentage of Public Work Exp.   | 74.1%    | 67.3%    | 68.3%    | 65.2%    | 59.1%    | 58.8%    | 74.5%    | 86.7%    | 84.4%    | 72.4%    | 63.1%    | 55.4%    | 53.7%    | 53.2%    | 50.6%    | 51.1%    | 48.9%    | 51.1%    | 51.7%    | 49.2%    | 46.6%    | 47.5%    | 59.0%    |
| <b>PHILADELPHIA, PENNSYLVANIA</b>                 |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Total Government Revenue                          | 2,070.8  | 2,559.8  | 2,530.6  | 2,718.6  | 2,529.8  | 2,452.2  | 2,609.9  | 2,981.5  | 3,064.8  | 2,947.7  | 3,364.6  | 3,356.9  | 3,532.8  | 3,601.8  | 3,642.7  | 3,539.0  | 3,495.6  | 3,458.8  | 3,542.7  | 3,504.2  | 3,745.6  | 3,427.0  | 3,121.7  |
| Total Revenues from Land & Fixed Assets           | 399.8    | 391.8    | 384.6    | 381.9    | 299.4    | 275.4    | 266.0    | 399.0    | 394.8    | 365.8    | 335.4    | 316.5    | 309.4    | 333.5    | 324.3    | 299.5    | 312.4    | 317.1    | 325.8    | 317.6    | 344.9    | 318.6    | 337.0    |
| Property Tax                                      | 1,271.3  | 391.0    | 384.3    | 381.7    | 299.3    | 275.3    | 265.9    | 398.8    | 394.8    | 365.8    | 335.4    | 316.5    | 309.3    | 333.5    | 324.2    | 299.5    | 312.3    | 316.9    | 325.8    | 317.6    | 344.9    | 318.6    | 337.0    |
| Special Assessment                                | 0.5      | 0.8      | 0.2      | 0.2      | 0.2      | 0.1      | 0.0      | 0.1      | 0.0      | 0.0      | 0.0      | 0.0      | 0.1      | 0.0      | 0.0      | 0.0      | 0.0      | 0.2      | 0.0      | 0.0      | 0.0      | 0.0      |          |
| Land Revenue as Percentage of Total Revenues      | 19.3%    | 15.3%    | 15.2%    | 14.0%    | 11.8%    | 11.2%    | 10.2%    | 13.4%    | 12.9%    | 12.4%    | 10.0%    | 9.4%     | 8.8%     | 9.3%     | 8.9%     | 8.5%     | 9.2%     | 9.2%     | 9.1%     | 9.2%     | 9.3%     | 10.8%    |          |
| Total Government Expenditures                     | 2,273.1  | 2,610.6  | 2,616.6  | 2,712.1  | 2,562.6  | 2,623.3  | 2,852.8  | 2,751.2  | 3,243.2  | 3,041.1  | 3,582.3  | 3,580.8  | 3,473.8  | 3,616.3  | 3,479.2  | 3,392.7  | 3,450.3  | 3,492.6  | 3,646.8  | 3,643.8  | 3,876.6  | 3,402.7  | 3,178.4  |
| Total Government Expenditures on Public Works     | 1,187.9  | 1,311.0  | 1,101.4  | 1,096.5  | 1,011.2  | 1,082.7  | 1,177.6  | 1,071.7  | 1,493.8  | 1,299.0  | 1,959.1  | 2,692.5  | 2,339.9  | 2,296.7  | 1,781.6  | 1,889.2  | 1,917.0  | 1,850.3  | 1,824.0  | 1,748.3  | 2,007.1  | 1,570.8  | 1,621.8  |
| Public Works Exp. as Percentage of Total Exp.     | 52.3%    | 50.2%    | 42.1%    | 40.4%    | 39.5%    | 41.3%    | 41.3%    | 39.0%    | 46.1%    | 42.7%    | 54.7%    | 75.2%    | 67.4%    | 62.7%    | 51.2%    | 55.7%    | 55.8%    | 53.0%    | 50.0%    | 48.0%    | 51.8%    | 46.2%    | 51.0%    |
| Land Revenues as Percentage of Total Expenditures | 17.6%    | 15.0%    | 14.7%    | 14.1%    | 11.7%    | 10.5%    | 9.3%     | 14.5%    | 12.2%    | 12.0%    | 9.4%     | 8.8%     | 8.9%     | 9.2%     | 9.3%     | 8.8%     | 9.1%     | 9.1%     | 8.9%     | 8.7%     | 8.9%     | 9.4%     | 10.8%    |
| Land Revenues as Percentage of Public Work Exp.   | 33.7%    | 29.9%    | 34.9%    | 34.8%    | 29.6%    | 25.4%    | 22.6%    | 37.2%    | 26.4%    | 28.2%    | 17.1%    | 11.8%    | 13.2%    | 14.7%    | 18.2%    | 15.9%    | 16.3%    | 17.1%    | 17.9%    | 18.2%    | 17.2%    | 20.3%    | 20.8%    |
| <b>SAN FRANCISCO, CALIFORNIA</b>                  |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
| Total Government Revenue                          | 2,064.9  | 2,211.9  | 2,331.8  | 2,267.3  | 2,040.3  | 1,995.2  | 2,187.8  | 2,163.9  | 2,236.2  | 2,169.8  | 2,202.3  | 2,190.7  | 2,353.8  | 2,515.7  | 2,515.3  | 2,642.4  | 2,996.1  | 3,000.1  | 2,803.5  | 2,894.1  | 3,211.3  | 3,145.9  | 2,464.6  |
| Total Revenues from Land & Fixed Assets           | 633.1    | 668.2    | 551.3    | 541.0    | 464.5    | 463.4    | 496.5    | 554.4    | 532.4    | 237.4    | 290.6    | 270.7    | 288.4    | 312.2    | 336.6    | 365.0    | 416.8    | 431.0    | 447.2    | 459.6    | 511.4    | 492.1    | 443.8    |
| Property Tax                                      | 631.0    | 666.7    | 549.9    | 539.7    | 463.4    | 463.0    | 496.2    | 554.2    | 532.3    | 237.2    | 290.6    | 270.7    | 288.4    | 312.2    | 336.6    | 365.0    | 416.8    | 431.0    | 447.2    | 459.6    | 511.4    | 492.1    | 443.8    |
| Special Assessment                                | 2.2      | 1.6      | 1.4      | 1.3      | 1.1      | 0.4      | 0.3      | 0.3      | 0.1      | 0.2      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      | 0.0      |          |
| Land Revenue as Percentage of Total Revenues      | 30.7%    | 30.2%    | 23.6%    | 23.9%    | 22.8%    | 23.2%    | 22.9%    | 25.6%    | 23.8%    | 10.9%    | 13.2%    | 12.4%    | 12.3%    | 12.4%    | 13.4%    | 13.8%    | 13.9%    | 14.4%    | 15.4%    | 15.9%    | 15.9%    | 15.6%    | 18.0%    |
| Total Government Expenditures                     | 1,936.0  | 2,076.9  | 2,125.2  | 2,086.9  | 1,880.8  | 1,907.4  | 4,839.5  | 2,084.4  | 2,095.8  | 1,950.3  | 1,850.4  | 1,867.8  | 1,970.3  | 2,150.6  | 2,135.3  | 2,355.8  | 2,444.8  | 2,473.5  | 2,534.3  | 2,490.7  | 2,775.4  | 2,790.2  | 2,310.1  |
| Total Government Expenditures on Public Works     | 965.4    | 1,013.0  | 987.9    | 885.5    | 819.1    | 871.9    | 750.7    | 1,036.8  | 1,154.0  | 1,309.4  | 1,296.1  | 1,276.8  | 1,278.9  | 1,382.1  | 1,218.2  | 1,424.6  | 1,525.6  | 1,390.6  | 1,455.3  | 1,327.2  | 1,507.4  | 1,589.2  | 1,202.1  |
| Public Works Exp. as Percentage of Total Exp.     | 49.9%    | 48.8%    | 46.5%    | 42.4%    | 43.6%    | 45.7%    | 15.5%    | 49.7%    | 55.1%    | 67.1%    | 70.0%    | 68.4%    | 64.9%    | 63.3%    | 57.0%    | 60.5%    | 62.4%    | 56.2%    | 57.4%    | 53.3%    | 54.3%    | 57.0%    | 52.0%    |
| Land Revenues as Percentage of Total Expenditures | 32.7%    | 32.2%    | 25.9%    | 25.9%    | 24.7%    | 24.3%    | 10.3%    | 26.6%    | 25.4%    | 12.2%    | 15.7%    | 14.5%    | 14.6%    | 14.5%    | 15.8%    | 15.5%    | 17.0%    | 17.4%    | 17.6%    | 18.5%    | 18.4%    | 17.6%    | 19.2%    |
| Land Revenues as Percentage of Public Work Exp.   | 65.6%    | 66.0%    | 55.8%    | 61.1%    | 56.7%    | 53.1%    | 66.1%    | 53.5%    | 46.1%    | 18.1%    | 22.4%    | 21.2%    | 22.6%    | 22.9%    | 27.6%    | 25.6%    | 27.3%    | 31.0%    | 30.7%    | 34.6%    | 33.9%    | 31.0%    | 36.9%    |

Appendix D  
LAND REVENUES AND PUBLIC INFRASTRUCTURE EXPENDITURES OF SELECTED CITIES: 1970-1991 (Continued)  
(Millions of 1991 US Dollars)

| WASHINGTON, D.C.                                  | 1970    | 1971    | 1972    | 1973    | 1974    | 1975    | 1976    | 1977    | 1978    | 1979    | 1980    | 1981    | 1982    | 1983    | 1984    | 1985    | 1986    | 1987    | 1988    | 1989    | 1990    | 1991    | Average |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total Government Revenue                          | 2,502.0 | 2,843.1 | 3,292.8 | 3,394.8 | 3,162.4 | 3,056.2 | 3,662.9 | 3,679.1 | 3,640.4 | 3,283.2 | 3,181.6 | 3,266.3 | 3,583.8 | 3,500.3 | 3,577.6 | 3,866.9 | 4,204.2 | 4,356.3 | 4,461.2 | 4,506.9 | 4,726.1 | 4,742.9 | 3,658.8 |
| Total Revenues from Land & Fixed Assets           | 446.1   | 456.9   | 464.7   | 435.2   | 393.0   | 349.9   | 345.4   | 365.1   | 402.2   | 387.4   | 356.2   | 411.6   | 467.3   | 491.5   | 511.7   | 568.4   | 596.6   | 651.3   | 701.5   | 782.8   | 802.6   | 884.6   | 512.4   |
| Property Tax                                      | 445.2   | 451.1   | 458.9   | 433.2   | 391.8   | 348.9   | 345.0   | 364.7   | 401.9   | 387.2   | 356.0   | 411.4   | 467.1   | 486.9   | 508.9   | 564.7   | 590.8   | 645.8   | 695.8   | 777.5   | 795.4   | 881.9   | 512.7   |
| Special Assessment                                | 1.0     | 5.8     | 5.8     | 2.0     | 1.2     | 1.0     | 0.4     | 0.4     | 0.3     | 0.2     | 0.2     | 0.2     | 0.2     | 4.5     | 2.8     | 3.6     | 5.8     | 5.5     | 5.7     | 5.4     | 7.2     | 2.7     | 1.0     |
| Land Revenue as Percentage of Total Revenues      | 17.8%   | 16.1%   | 14.1%   | 12.8%   | 12.4%   | 11.4%   | 9.4%    | 9.9%    | 11.0%   | 11.8%   | 11.2%   | 12.6%   | 13.0%   | 14.0%   | 14.3%   | 14.7%   | 14.2%   | 15.0%   | 15.7%   | 17.4%   | 17.0%   | 18.7%   | 14.0%   |
| Total Government Expenditures                     | 2,864.0 | 3,212.0 | 3,876.8 | 3,954.7 | 3,630.6 | 3,735.2 | 4,121.7 | 3,652.1 | 3,622.5 | 3,572.3 | 3,424.0 | 3,265.9 | 3,522.7 | 3,533.8 | 3,595.2 | 3,888.8 | 4,087.7 | 4,334.1 | 4,610.0 | 4,535.7 | 4,936.1 | 4,802.6 | 3,862.6 |
| Total Government Expenditures on Public Works     | 755.3   | 911.8   | 1,045.9 | 999.5   | 663.9   | 688.4   | 789.9   | 692.8   | 859.3   | 870.3   | 879.1   | 710.3   | 1,007.8 | 758.0   | 752.9   | 838.7   | 834.4   | 951.8   | 1,104.0 | 1,000.9 | 1,292.2 | 1,253.5 | 893.7   |
| Public Works Exp. as Percentage of Total Exp.     | 26.4%   | 28.4%   | 27.0%   | 25.3%   | 17.3%   | 18.4%   | 19.2%   | 19.0%   | 23.7%   | 24.4%   | 25.7%   | 21.7%   | 28.6%   | 21.4%   | 20.9%   | 21.6%   | 20.4%   | 22.0%   | 23.9%   | 22.1%   | 26.2%   | 26.1%   | 23.1%   |
| Land Revenues as Percentage of Total Expenditures | 15.6%   | 14.2%   | 12.0%   | 11.0%   | 10.3%   | 9.4%    | 8.4%    | 10.0%   | 11.1%   | 10.8%   | 10.4%   | 12.6%   | 13.3%   | 13.9%   | 14.2%   | 14.8%   | 14.6%   | 15.0%   | 15.2%   | 17.3%   | 16.3%   | 18.4%   | 13.3%   |
| Land Revenues as Percentage of Public Work Exp.   | 59.1%   | 50.1%   | 44.4%   | 43.5%   | 59.2%   | 50.8%   | 43.7%   | 52.7%   | 46.8%   | 44.5%   | 40.5%   | 58.0%   | 46.4%   | 64.8%   | 68.0%   | 67.8%   | 71.5%   | 68.4%   | 63.5%   | 78.2%   | 62.1%   | 70.6%   | 57.3%   |

| SINGAPORE  | 1970 | 1971 | 1972    | 1973    | 1974    | 1975    | 1976    | 1977    | 1978    | 1979    | 1980    | 1981    | 1982    | 1983    | 1984    | 1985    | 1986    | 1987    | 1988    | 1989    | 1990     | 1991     | Average |
|--|------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|---------|
| Total Government Revenue                         | n.a. | n.a. | 1,423.6 | 1,662.7 | 1,781.8 | 2,082.4 | 2,103.4 | 2,352.3 | 2,556.3 | 3,135.6 | 3,914.4 | 4,687.3 | 5,144.3 | 6,087.7 | 5,871.8 | 7,145.4 | 7,424.9 | 7,045.9 | 7,804.2 | 9,151.2 | 11,931.2 | 13,443.3 | 5,329.0 |
| Total Revenue from Land & Fixed Assets           | n.a. | n.a. | 181.5   | 292.7   | 291.6   | 342.3   | 317.2   | 270.3   | 299.7   | 513.2   | 492.6   | 892.6   | 981.8   | 976.8   | 771.6   | 2,431.0 | 2,542.8 | 772.7   | 781.5   | 1,382.6 | 2,677.3  | 2,701.5  | 994.7   |
| Property Tax                                     | n.a. | n.a. | 147.8   | 177.1   | 199.1   | 195.3   | 227.4   | 222.1   | 273.5   | 338.1   | 346.5   | 413.4   | 459.5   | 574.1   | 651.6   | 509.1   | 357.1   | 368.0   | 488.8   | 546.9   | 851.3    | 787.5    | 395.7   |
| Land Sale & Income                               | n.a. | n.a. | 33.6    | 115.6   | 92.7    | 147.0   | 89.8    | 48.2    | 26.2    | 175.2   | 146.1   | 479.2   | 522.3   | 402.7   | 120.0   | 1,921.9 | 2,185.7 | 404.7   | 312.9   | 815.6   | 2,026.0  | 1,914.0  | 599.0   |
| Land Revenue as Percentage of Total Revenue      | n.a. | n.a. | 12.7%   | 17.3%   | 16.4%   | 16.4%   | 15.1%   | 11.5%   | 11.7%   | 16.4%   | 12.6%   | 19.0%   | 19.1%   | 16.0%   | 13.1%   | 34.0%   | 34.2%   | 11.0%   | 10.3%   | 14.9%   | 22.4%    | 20.1%    | 18.7%   |
| Total Government Expenditures                    | n.a. | n.a. | 1,070.8 | 1,176.9 | 1,251.0 | 1,488.9 | 1,758.9 | 1,964.1 | 2,150.5 | 2,498.1 | 2,972.5 | 3,683.1 | 3,550.4 | 4,298.3 | 5,257.8 | 5,120.4 | 5,672.2 | 7,794.1 | 6,175.3 | 6,950.7 | 7,843.3  | 9,238.0  | 4,095.8 |
| Total Government Expenditures on Public Works    | n.a. | n.a. | 231.3   | 305.7   | 384.4   | 551.5   | 834.0   | 885.9   | 1,003.9 | 1,146.9 | 1,438.8 | 1,620.0 | 1,553.0 | 1,887.3 | 2,448.3 | 2,955.7 | 2,345.2 | 2,694.2 | 2,000.5 | 2,908.8 | 2,633.6  | 2,483.4  | 1,615.6 |
| Public Works Exp. as Percentage of Total Exp.    | n.a. | n.a. | 21.6%   | 26.0%   | 30.7%   | 37.0%   | 47.4%   | 45.1%   | 46.7%   | 45.9%   | 48.4%   | 44.0%   | 43.7%   | 43.9%   | 46.6%   | 57.7%   | 41.3%   | 34.6%   | 32.4%   | 41.8%   | 33.6%    | 26.9%    | 39.4%   |
| Land Revenue as Percentage of Total Expenditures | n.a. | n.a. | 16.9%   | 24.9%   | 23.3%   | 23.0%   | 18.0%   | 13.8%   | 13.9%   | 20.5%   | 16.6%   | 24.2%   | 27.7%   | 22.7%   | 14.7%   | 47.5%   | 44.6%   | 9.9%    | 12.7%   | 19.6%   | 34.1%    | 29.2%    | 24.3%   |
| Land Revenue as Percentage of Public Work Exp.   | n.a. | n.a. | 78.5%   | 95.7%   | 75.9%   | 62.1%   | 38.0%   | 30.5%   | 29.9%   | 44.7%   | 34.2%   | 55.1%   | 63.2%   | 51.6%   | 31.5%   | 82.2%   | 108.4%  | 28.7%   | 39.1%   | 46.8%   | 101.7%   | 108.8%   | 61.6%   |

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(2) Exp. = Expenditures

n.a. = Data are not available.

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